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—Edited by—

Robert D. Jewett, M.D.

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Original Communications.

ANNUAL DEBATE—THE ABUSE OF ALCOHOLIC STIMULANTS IN PRACTICE.

By A. A. Kent, M.D., Lenoir, N. C.

Mr. President and Gentlemen:—As your appointed Leader of Debate, in offering for your consideration and discussion a paper on the subject announced in our programme, I recognize fully the fact that there are two sides to this subject. If I did not deem it a subject upon which we entertain different and very positive theoretical views by which we are guided in practice, I would not have considered it a fit subject to offer you for discussion. No doubt some of you will see the subject in a very different light from my own. I hope those gentlemen who do, and also those who agree with me, will not hesitate to express their views in the discussion which, I trust, will follow the reading of this paper. I am here to receive instruction as well as to give you the benefit of my own ideas. It may be that we will all modify our views by a frank exchange of opinion.

I am well aware that alcohol in some form has long been the stimulant mostly relied upon in the practice of medicine—that it is a generally accepted doctrine that alcohol is a stimulant to the digestion, a cardiac tonic, a conservator of tissue, capable of increasing and sustaining the vital energy, and therefore indispensable in the treatment of all low grades of disease, shock, collapse, etc. But there have been many accepted doctrines in the history of medicine that have proven to be fallacious. Many long-used remedies have been dropped and forgotten, their places being supplied by other and better agents.

I began the practice of medicine with the popular belief that in all low forms of disease alcohol was the all-safe, all-potent, and only stimulant to be used. Experience has taught me a different lesson, and the more experience I have, the stronger my convictions grow that this too general and too exces-

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*Read before the North Carolina Medical Society, May 15, 1895.

sive use of alcohol as a stimulant in practice is erroneous. With experience our ideas change. They will change. And "many pet theories which we to-day look upon as being the very foundation-stones upon which our noble profession rests will crumble to dust." Many of our cherished idols have fallen and humanity has always been the benefactor. I do not claim to be in advance, but only following the lead of others—only in harmony with the tendency of the medical profession of the day. With our improved therapeutics alcohol is justly losing ground as a medical agent. Strychnine, nitroglycerine, digitalis, caffeine and others are found to be more reliable, more powerful and less harmful agents. The more these remedies are used the more they grow in favor and the less is the necessity for the use of alcoholics.

For a long time alcohol has been, and even at the present time is, the only stimulant administered by the general practitioner. It appears to be the only stimulant at his command with which he is at all familiar. Notwithstanding its many pernicious effects in the human economy, if there be heart-failure he gives alcohol; in profound coma, alcohol; in chloroform narcosis, alcohol; in feeble digestion, alcohol; in flagging nerve-force, alcohol; in threatened exhaustion from post-partum hæmorrhage, alcohol; during the crisis in pneumonia, alcohol; in the exhaustion of typhoid fever, alcohol; in every critical condition, where the patient is vibrating between life and death, alcohol is his first and only thought. Not content with this reckless use of a bad agent, like the man who took his dram first to get ahead of the snake-bite, he must needs forestall all these expected evils by the early use of alcoholic stimulants in almost every case of sickness. I respectfully assert that this frequent and excessive use of alcohol in practice is not needed. Even where a stimulant is indicated, we have other more reliable stimulants that are free from any of the hurtful influences that alcoholics exert.

It is in typhoid fever that alcohol is, perhaps, most used; and for that reason it is here that it likewise does its greatest amount of harm. With our advanced knowledge of the specific nature of typhoid fever and of the use of specific remedies in combating it, few cases properly managed will need any stimulant whatever. It is claimed first, for alcohol in this disease, that it stimulates the function of digestion. I grant that a very small quantity, not more than one teaspoonful at a dose, may aid digestion. But this is far below the quantity usually employed in fevers, one-half to one ounce of whiskey or brandy every two or three hours being usually given. This quantity materially interferes with, or entirely arrests, the process of digestion by precipitating the pepsin, the natural ferment of the gastric juice. Strength can only be supported for any considerable length of time by food, and by this excessive use of alcohol we deprive the patient of this all-important support, without which he cannot long be sustained. But further, alcohol flushes the capillaries of the stomach just as it does those of the skin. Where there is already a smouldering congestion of the mucous coat of the stomach, it takes but little to light up the fire of acute inflammation. The continued use of such quantities as are given in low fevers often produces this complication. Many patients that are making a feeble, yet hopeful, struggle for life, are thus deprived of natural food; and as they grow weaker and weaker, this mistaken conservator of strength is still pushed, in quantity and frequency, till the congestion and then gastritis are added to more severely tax the already failing vitality. If alcohol had no other hurtful effect, because of this alone it should never be given in such quantities as are prescribed in low fevers, such as typhoid. It was this interference with digestion and frequent production of gastritis that caused me to discard it in low fevers.

Its doubtful physiological action and harmful effects have only just begun when it has destroyed the power of digestion and produced a most serious complication in the form of gastritis. As evidence of its doubtful and even hurtful utility, I quote from Ringer's Therapeutics.

"The following rules," he says, "regarding the use of stimulants in fever were laid down by Dr. Armstrong, and will receive the assent of all practical men":

"1. If the tongue become more dry and baked, acoholic stimulants generally do harm; if it become moist, they do good.

"2. If the pulse become quicker, they do harm; if it become slower, they do good.

"3. If the skin become hot and parched, they do harm; if it become more comfortably moist, they do good.

"4. If the breathing become more hurried, they do harm; if it become more and more tranquil, they do good."

He says further: "These excellent rules might be supplemented by a fifth—Alcohol does good when it produces sleep and quiets delirium." On the other hand, as Bartholow says: "Does harm when it increases fever, exaggerates delirium and induces coma vigil."

Here we have a complete set of rules for our guidance laid down by our best medical authors. Was ever a set of rules more replete with uncertainty or more suggestive of harm? You are not assured of the certainty of any single physiological action. In every case you are just as liable to kill as to cure your patient, and in no case are you told which it is going to do till you have tried it. Would you risk *your* life, or even your money, upon such doubtful security? Is it right to jeopardize the life of your patient with such an unreliable remedy, fraught with so many chances of peril? You can never know till you have tried it just what it is going to do—whether it is going to send your patient up or down. The time lost in the trial may be the turning point for the worse in his fate. We have all seen cases in which a day passed meant recovery or the contrary. In such extremities it is not safe to be experimenting with a doubtful stimulant. Or, worse yet, the downward impulse given by some untoward action of this uncertain agent, when given on trial, often puts the patient beyond the hope of recovery. Even when the action is beneficial at one or more points, it is often doing irreparable mischief in some other equally vital parts. It may be stimulating the digestion, but it is also accelerating the heart's action, increasing the fever and greatly increasing the expenditure of vital energy, producing the very exhaustion that the doctor is endeavoring to guard against. If it is slowing the pulse and relaxing the arterial tension, it is also arresting digestion, producing congestion and inflammation of the mucous coat of the stomach. Hence, I say, if it is doing good at one point it is doing mischief, may be insidiously, at some other equally vital point. It is in these cases of low fevers that the doctor is called upon to make his hardest and best fight for the life of his patient. It is not good military tactics to go into the battle with only such doubtful weapons in his hands. He has to do battle with a foe that taxes and often defies every resource at his command—what folly to leave in doubt the action or potency of the ammunition! Why reduce the chances of success by having in your hands only an untrustworthy weapon!

But what should we do? The answer is simple and easy. Use specific remedies for specific purposes. When a food is needed use a food pure and simple. If the digestion must be aided, use dilute muriatic acid and pure scale pepsin, enough to peptonize the amount of food that should be given. If an antipyretic be needed, use the sponge, the bath or other antipyretic properly fortified; for alcohol short of lethal doses never reduces the temperature more than 0.4 or 0.6 of a degree. If the heart's action must be slowed and strengthened, use a heart tonic *per se*—use digitalis. If a powerful nerve stimulant be needed to spur the flagging energies, to maintain the heart's action, to sustain the respiration, to revitalize the failing senses, use strychnine. It will not fail you, will not cripple your prostrate patient in some unexpected way, will rescue him from the very "shadow of the valley of death" as no other remedy can do it.

One of the common and most dangerous uses of alcohol as a stimulant is during hæmorrhage. It is customary when hæmorrhage occurs, either by accident or in the process of disease, to administer whiskey or brandy under the false idea of supporting the vital powers. I desire to condemn this practice with all the emphasis in my power. In every form of hæmorrhage, where the bleeding has not been arrested as by ligature, alcohol only increases the danger by increasing the hæmorrhage. Alcohol relaxes the arterial tension and at the same time increases the force and frequency of the heart's action. It destroys the contractile power of the middle muscular coat of the arteries, preventing this natural means of arresting the flow from the several blood-vessels, and also by increasing the heart's action sends a greater and more rapidly flowing volume of blood to the severed vessels, thus washing out and preventing the formation of a clot, the most effective possible check upon the flow. If a stimulant must be used, it should be one that increases the arterial tension at the same time that it increases the heart's action. The argument does not stop here. The action of alcohol being such as to contra-indicate its use where hæmorrhage already exists, the same physiological action maintains where hæmorrhage is likely to occur, and for the very same reasons it is contra-indicated there. This abuse is most common in typhoid fever where hæmorrhage from the bowels is a frequent and dangerous complication. When the arterial walls are weakened at certain points by ulceration, their contractile power lost, admitting of over-distention, the arterial resistance to the force of the heart's action lost, allowing the entire force of the volume of blood sent from the heart to be exerted upon the weakened points, rupture and hæmorrhage must of necessity be more liable to happen. Alcoholics being in such general use in typhoid fever, who can say how many cases of hæmorrhage may or may not be due to alcohol alone? We are certain of the fact that where hæmorrhage is liable to occur the use of alcohol increases that liability. The complication is such a grave one that the necessity for alcohol, and for alcohol alone, should be most urgent to justify its use. Since we have other stimulants that can perform all of its good offices without any of the bad, its use is all the more unwarranted. Such agents we have in digitalis and strychnine, which strengthen the heart-beats and at the same time increase the arterial tension.

The too general use of artificial stimulants in pulmonary diseases is abusive mainly because we have other better stimulants. It has perhaps done much good in this field, but its too general use is doubtful. In pulmonary phthisis, during all the long years that alcohol ranked among the best remedies, the mortality steadily kept up to 100 per cent. It is only since we have learned of other remedies that we hear of a percentage of cures. I can do no better here than to quote from Dr. T. J. Keys, Professor of Diseases of the Chest, Philadelphia Polyclinic, on the use of strychnine in these diseases. He says: "This drug gives better practical results in the treatment of pulmonary diseases than any other single remedy at our command. It has a more powerful stimulating influence over the nervous system than any other drug in the materia medica. Besides its general action it has a special influence on the nerve supply of the lungs, heart, stomach and intestines. It has also the faculty of multiplying the corpuscular elements of the blood. A combination of such properties makes it apparent why it should possess such beneficial therapeutic effect in the diseases under consideration. Bronchitis, whether acute or chronic, is much benefited by strychnia. It checks the cough, diminishes the expectoration, improves the appetite, puts to one side the whole constitutional relaxation and feebleness present, especially in the chronic form of the disease. It is one of the most useful agents in the treatment of acute pneumonia. I know of no disease more eminently benefited by strychnia than pulmonary consumption." This authority is so high and the facts set forth so explicit, that no commentation on my part is needed. I only ask of you to try strychnine in the place of alcohol in all pulmonary diseases, and thus be convinced.

In shock alcohol is a valuable remedy, meeting well the indications. But for convenience of administration and in cases of profound shock, where whiskey or brandy could not be swallowed, strychnine hypodermically at once suggests itself. "Its action is analogous to electricity. It discharges its force into the system in a manner similar to electricity." "If shock be severe and collapse threatened, strychnine takes the first rank. It should be given in large doses, not less than $\frac{1}{20}$ grain, and repeated several times, at short intervals, if needed."

In chloroform narcosis due credit must again be given to alcohol. But I must earnestly advise against its use as a preventive of chloroform narcosis, where the anæsthesia is to be continued for a considerable time. The secondary action of alcohol is similar to the action of chloroform, and where the anæsthetic is to be continued for some time the secondary effect of the alcohol might come on and only deepen the chloroform narcosis. The dictum of Dr. Stephen Smith, an eminent surgeon—"Send your patient to the operating table drunk"—is certainly abusive use of alcohol, rife with danger and to be condemned. Even here strychnine, given hypodermically as a preventive or in the emergency, is more powerful, more convenient of administration and safer.

The same is true of strychnine in threatened collapse from any cause. It is the most powerful cardiac and respiratory stimulant. Being readily given hypodermically, it acts promptly, and can be given when whiskey or brandy cannot be ingested. The more generally it becomes used, the more confidence we have in its use, and the wider its range of usefulness expands. In small doses it is a most valuable tonic in many atonic conditions. In larger doses it gently stimulates the flagging forces of nature when they threaten cessation of action, renewing and sustaining the vital energies in the most severe wasting diseases, in a manner more in harmony with nature than any other agent. In heroic doses, next to electricity, it is our most powerful vital incitant, invaluable in warding off and overcoming shock, collapse and chloroform narcosis. Like the electric flash, that kills at a single stroke, it is equally potent for good when used in proper limits. Just as the electric motor is destined to supplant the steam engine as a motor-power in the world of mechanics, strychnine will take the place of alcohol as a stimulant in the medical world—not entirely, not all at once, but none the less surely.

References:

(1) Bartholow, Materia Med.; (2) Ringer's Therapeutics; (3) Bartholow, Materia Med.; (4) Ringer's Therapeutics; (5) Col. and Clin. Record, Nov. 1893;) (6) Dosimet Med. Rev., Dec., 1894; (7) Geiger, Int. Journal Surg., Nov., 1894; (8) N. S. Davis, M.D., Brief, Nov., 1891; (9) The Asclepiad, Vol. viii., Nov. 29, 1891; (10) Editorial in Int. Jour. Surg., Nov., 1894.

DISCUSSION.

Dr. ———— said that the stimulation of alcohol is indicated in hemorrhage of the viscera, hemorrhage of the lungs, etc. We give it in cases of pulmonary phthisis for several reasons—for a stimulant and for food. We can take a specimen and place it in alcohol and so preserve it. In the same way the alcohol in the veins helps the tissues from putrefaction. When the pulse is very weak, he knew of nothing that would act like whiskey, given at regular intervals.

Dr. Hill said that all remedies are abused, and that the true physician should use whatever he found to benefit his patient. Dr. Wood, in his work on materia medica and therapeutics, says that alcohol furnishes nutriment by promoting digestion and by oxidation counteracts tissue waste of the patient. He had practiced physics for some time in Missouri and there was a great deal of pneumonia and the people used alcohol in such cases "externally, internally and eternally." While there he used the whiskey treatment in connection with alcohol, but since coming to North Carolina he had treated altogether with whiskey in cases of pneumonia, and successfully. He believed that as long as he found alcohol useful to him he should use it.

Dr. Bahnson rose to express the thanks of the Society for the paper. He differed from the gentleman in many of his conclusions, though he gave due weight to the authorities cited. He had no doubt, as Dr. Hill had said, that alcohol had been a very good remedy and that it should not be discarded until we are sure of a better. In this connection he asked to relate an incident of his boyhood: He was in an audience listening to a temperance lecture, when the speaker said: "Show me the man who has reached the three-score-and-ten years who has used alcohol continuously," and paused. An old gentleman by him, who hadn't drawn a sober breath for years, rose up and said: "Eighty-five," and sat down. He intended that to illustrate the fact that circumstances alter cases—the physician must adapt his treatment to the necessity of the individual patient—no cast-iron rules can be laid down.

By the way, he said that he could recognize no difference between peripheral vessels in supplying the lungs and the external organs. It seemed to him that pulmonary vessels would be the better name for those designated. He regarded strychnine as a very good stimulant. He usually gave one-twentieth of a grain for a dose and thought that was nothing to shrink from.

Dr. Sikes expressed his co-operation with Dr. Kent in his ideas. It did not seem to him that the doctor had annihilated the use of alcohol altogether, but he did think with Dr. Kent that when one thing was found to act better than another that it should be used and the change made. Dr. Kent claimed that digitalis and strychnine do the work that has formerly been done by alcohol, and Dr. Sikes could only say that all they had to do was to try it.

He did not believe that any drug had been more abused in the use in pneumonia than alcohol. For himself he could treat it as well without alcohol as with it. In typhoid fever for some years he had almost entirely abandoned the use of alcohol, because he could get better results without it. You will be sure never to find a better remedy unless you try others. He believed that the time was rapidly coming when the use of alcohol will be reduced.

Dr. Faison thanked Dr. Kent, and said that he would be glad if there was not a drop of whiskey on the face of the earth. He had never relied upon whiskey in pneumonia. Dr. Kent had not mentioned one heart tonic which he considered very important; he had never seen a patient brought out more quickly than by a hypodermic injection of morphine. He rarely ever used alcohol in digestive troubles. As to strychnine, he heartily agreed with what Dr. Bahnson had said. He did not believe that any man had ever died for the want of whiskey, but he had seen many who died from the effect of it. He was glad that Dr. Kent was on the right road, and reiterated what he had stated before, that if he had the right and power he would put alcohol from off the earth.

Dr. Herring joined with Dr. Kent and Dr. Faison in their opinion concerning the use of alcohol. He never used it unless he did not know what else to do. At one time he gave a quart of whiskey to a young woman twenty-four years old, for weakness, and she got well, whether from the effect of the alcohol or in spite of it, he knew not. She was insane from the effect of a severe case of diphtheria when he saw her, and whiskey was given because he didn't know what else to give. A man who uses it dies a miserable death sometimes. He asked the young men to lay a veto down against wine, whiskey and brandy. He treated pneumonia without it entirely, but found the best effect from opium. He told of a case in which he gave opium instead of whiskey and put the patient to sleep, and, upon waking, he began to improve. He used morphine and quinine. Whiskey is destructive to the constitution of man.

Dr. Riddick was satisfied that whiskey was one of the most necessary stimulants in the world, and he frequently used it. He also favored the use of strychnine, always having good results.

Dr. Kent closed the discussion, saying that he had been much gratified by the discussion, as he had felt the importance of the selection of the subject for the discussion. During ten years of his practice he had relied solely upon alcohol as a stimulant, but had never had satisfactory results, and he had found in strychnine a valuable substitute. He used whiskey until he found it doing mischief, and then he would substitute strychnine. He now used strychnine almost entirely. He appealed to the members of the Society that they at least try strychnine and decide for themselves.

UNCONTROLLABLE VOMITING OF PREGNANCY.

By W. S. Anderson, M.D., Wilson, N. C.

Of all the afflictions of the human family, there is perhaps none so universal as nausea and vomiting, to some degree, during pregnancy. While some escape, and even enjoy better health than at any other time, a large majority suffer more or less.

My object in presenting this paper, Mr. President and gentlemen of the Society, is not so much to advance some new theory or new remedy for this dreadful malady, but to call attention to and emphasize some of the old ones, and, if possible, provoke discussion on the subject that may do us all good, For of all the diseases we as medical men are called upon to treat, I know of none which makes one feel more helpless than the uncontrollable vomiting of pregnancy. Day after day we persist in our treatment, going from one favorite remedy to another, only to meet with disappointment and utter failure. Time nor space will allow me to discuss this trouble in all of its different phases in detail, but I hope to touch on some of the most important points and impress upon us as guardians of the health and happiness of our patrons, the importance of our duty in the premises.

Then, what is the cause of sick stomach of pregnancy, and what is the best treatment for it, and how may we diagnose and treat it in the ordinary form, to prevent its becoming extraordinary and uncontrollable? Of course the first cause is pregnancy, which produces more or less organic and functional modification of the whole system, especially the nervous system.

Then there may be an erosion, a displacment, an inflammation of the uterine tissue or ovary, stricture or hyperæsthesia of the internal os, or a diseased ovum, and in addition to these causes which bear an intimate relation to pregnancy, vomiting due to some functional or organic trouble of the stomach. One or more of these causes may operate with the first cause, and if not checked bring on uncontrollable vomiting.

In this, as in every other disease we are called upon to treat, it is all-important that we make an early and a correct diagnosis, which at first thought would seem extremely easy, but Guiniot has rightly shown that it includes three very distinct factors:

1. The diagnosis of pregnancy.
2. The diagnosis of any lesion, malposition or inflammation of os, neck, ovum, womb or ovary.
3. The differential diagnosis between obstinate vomiting due to pregnancy or some one of the above enumerated causes, and that due to some other

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*Read before the North Carolina Medical Society, May 15, 1895.

cause independent of gestation. A correct diagnosis, made early in the disease, before the second stage is reached, will in many cases enable us to cut short the disease. But if we fail to detect the exciting cause and apply the proper treatment early and the disease reaches well the second stage, the prognosis will almost surely be unfavorable. When we come to consider the treatment for this dreadful disease, we must remember that, so far as the pathological anatomy is concerned, the lesions in the stomach are negative or diverse in character. It is true that the muscles and adipose tissue have been found atrophied and the intestines decreased in size, with occasional softening and injection of the mucous membrane of the stomach; as to the muscles and fat, they would suffer the same from want of nourishment from any other cause, and the lesions found in the stomach are not sufficient of themselves to cause death; yet, if the vomiting is not checked, the woman will surely die. The multiplicity of remedies recommended by different writers only prove their small value and uncertain action. One of the mistakes we are most liable to make when first called to these cases is the prescribing of a general course of medicines and neglecting or putting off a thorough examination of the womb and its appendages. While the former is important and healthful in the treatment, the latter is more so. The unwillingness of most women to submit to an examination causes the practitioner to put off till later what ought to be attended to early in the disease. I wish to impress this upon every one who has not learned the importance of an early examination in these troubles, not to delay too long what ought to be done at once; for I believe in every case where the symptoms become obstinate after a round or so of the usual remedies have been given for the liver and stomach without benefit, a careful examination will reveal some inflammation of the womb or its appendages, malposition, a constricted neck, a diseased ovum or pressure upon some nerve which excites the reflex vomiting; for the vomiting must be in great part reflex, since the pathological anatomy does not, in a large majority of cases, indicate any organic trouble of the stomach, and one of the grandest proofs of this is that very often the symptoms will disappear suddenly. Then, in my judgment, the first thing to do is to find the exciting cause and remove it. If it is a malposition, replace and hold it in position with a tampon of cotton or wool until it can hold itself in position. If there is an erosion, cure it, and if there is stricture of the neck and internal os, dilate it either with the finger or steel dilator, being careful always not to go beyond the internal os. Upon careful examination, if erosions, inflammations of all kinds of the womb and its appendages, stricture of the neck and malpositions be excluded, our conclusions must be a diseased ovum, and abortion should be practiced as soon as all the above causes have been excluded if the symptoms persist; and right here is considered the nice point, as to when abortion should be brought on; certainly it should not be delayed till the life of the patient is endangered by the operation.

If the above is true, and the cause or causes be sought out and removed early, I doubt whether we would have any cases of uncontrollable vomiting of pregnancy. I have had two very bad cases within the past few years, both primiparas. The first one I did not see till the second stage was well advanced. The womb was well down in the pelvis to the left side, with the fundus craned to the right with some flexion at the neck. The attending physician informed me that he, with a medical friend, had dilated the os with no benefit. I at once suggested the tampon, to which he objected, and for three or four days we continued medication. At the end of this time, however, I was asked to take charge of the case. I at once put the woman in the knee-chest position and introduced a tampon of several pieces of cotton balled up, the first piece flat, wet with glycerine. She felt relieved and for one day seemed much better, but the womb was so heavy, and the vagina at that time was quite red and dotted with diphtheritic membrane, the tampon could not be put in sufficiently strong to hold it up. At this time she was very restless and weak. I gave her opiates and various other anodynes, but the application of electricity, one electrode to the womb and the other passed up and down the spine, gave her more relief than anything else. She complained of being very tired, and said the electricity rested her. But her strength by this time was well-nigh exhausted and death soon closed the scene.

My second case was last year. This case drifted along as they usually do, the symptoms gradually growing worse and putting off from time to time the first and all-important thing—a thorough examination of the womb, when at last she consented, I found an abundant glairy, tenacious discharge from the neck, which was inflamed and swollen, with considerable congestion of the vagina and right ovary tender. I cauterized the neck with the solid stick of nitrate of silver, and applied a tampon wet with boroglyceride and alum. The first application gave her some relief, and after the third the relief was so great she consented for me to go to Greensboro, where this Society was then in session.

She remained in a fair condition until a few days after my return, when all the symptoms returned, exaggerated, if possible. When the family wanted consultation, I continued the caustic applications and nourished her with predigested foods per rectum.

Dr. Whitehead was called in and endorsed the treatment, adding oxide of silver, which, I think, did some good; and from that time on she continued to improve, and at full term was delivered of a fine girl baby.

DISCUSSION.

Dr. McMullan was impressed with the fact that the doctor attributed the trouble to pregnancy. Of course all know that the vomiting of pregnancy is reflex in character. It is due to the sympathetic connection of the uterus and stomach. His treatment was to cut off that connection, and that was the treatment he should prescribe. Under no circumstances would he suggest that an examination be made. The prescription is bromide of potassium or sodium, and as it is harmless in character, he did not hesitate to keep the patient under its influence. When the uterus becomes sufficiently enlarged the vomiting passes away. Of course, when that treatment fails, he would cast about for other causes and look for the cause the doctor has described. Bromide of potassium has given better results for him than any other remedy he had ever used.

Dr. Booth wanted to say a word in regard to medical treatment of vomiting in pregnancy. So far as he knew the causes of these obstetric troubles was the primiperal condition. As a rule in this day and time our girls are not properly developed. The uterus is not fully developed until impregnation takes place, and it has to attempt to develop with the effort at dilation. There is a hard surface that will not give way, and there is nothing the matter with the stomach. That is nonsense, the cause is reflex action. He uses oxalate of cerium. The old dose was two grains, but as a rule, two grains will not do any good. The old dispensary tells us not to give too much. He was called to a lady several months ago who had been sick for weeks. He prescribed five grains for her. The other doctor had been giving her two grains. She never had any nausea after that, and was out in a day or two.

The next case after that was a little red-headed woman, very nervous, and he tried the same drug. It did no good and he gave her forty grains of bromide of potash and twenty grains of chloral hydrate. In a day or two she was well.

In another case the bromide treatment would keep her quiet and comfortable for a while, and then it would return. On examining her he found the uterus jammed down against the posterior wall of the vagina, and lifted it up, and she had no more sick stomach. This thing is a reflex trouble and sometimes it can be stopped by cutting off the telegraphic connection, if there is not some trouble with the uterus. The thing is to find out where the trouble is and to try to relieve that trouble.

Dr. McDowell wanted to endorse what Dr. McMullan had said with reference to the use of potassium bromide. Frequent doses of bromide of potassium often accomplished the desired effect. In regard to digestive ferments, he did not suppose that any physician ever gave digestive ferments with any idea that there was especially a disease of the stomach, but all know that there is some length of time between the ingestion of food and the vomiting. It is not long enough for digestion to take place by the ordinary process, the digestive ferments having been given with the idea of assisting digestion so that a sufficient quantity of food may be absorbed before vomiting occurred, in order to keep up the nutrition of the patient until the period of nausea was passed. Ordinarily that passes about the close of the third month. With this end in view, he thought that the digestive ferments had done, and still do, a great deal of good. It frequently occurs that the digestive fluid of the stomach is changed by the condition. It may need an assistant, and pepsin and pancreatic fluid may be used. Sometimes these do not help the matter. He had seen the vomiting begin on the first day and keep up till the day the child was born. Nutrition was kept up almost entirely by the use of digestive ferments, and she took enough nutrition to keep her in good condition throughout the period.

Dr. Hines said that the difficulty to him was getting anything to remain on the stomach. In one case, which lasted about a month, nearly everything that he prepared relieved the patient the first day and she was all right, but the next day it returned. One very remarkable case which he should report was a woman who had been bed-ridden for months. She had the most irritable stomach he had ever seen; she could not retain laudanum and starch. He did not make any vaginal examination, but thought his associate had. She could not take anything by stomach or rectum. The only thing she took in three weeks was a little tea. She was nourished by the external application of lard and was kept alive for three weeks with that treatment. She recovered from the nausea and had better health than she had had for years and went on to the full term without the least difficulty. He had never seen one die from vomiting in pregnancy. It is a local disease and requires local treatment. He should insist on an examination, and should treat the disease locally.

Dr. Haigh knew of no more disappointing case that comes to the charge of physicians, and none that gives more trouble, and where they are more in the dark with regard to the exact treatment of the case, than this trouble of vomiting in pregnancy—there are so many points to be looked at. There is particularly one which is to be guarded against, and it is so difficult to tell when you have arrived at that point, that it keeps you under a constant strain when you feel that the life of the patient is gradually ebbing away, and cannot see when exactly to step in and use the heroic treatment by putting an end to the pregnancy. The cause of this trouble undoubtedly lies in the condition and upon the influences exerted upon the nerves by this condition. The treatment must lie along that line that the doctor has said in cutting off this connection. Sometimes it can be done in one way, sometimes in another. If the system can ever be gotten under control, so that the local remedies can be used, little difficulty would be found in controlling the one by first giving a hypodermic of morphine. That will for a moment quiet the stomach. It will relax, to a certain extent, the os; it will render less irritable the rectum, so that chloral can be used by enema, and that was one of the best remedies that he had ever used in such cases. He gave an enema of thirty grains of chloral and retained by pressure for a half hour, and it seemed to him to act more promptly than any remedy that he had ever used, except the dilatation of the os. But there are times when none of these remedies act as it is expected, and the final resort is to emptying the uterus and relieving the system of the real cause of the trouble, which is the pregnancy, and that seemed to him the great difficult point to determine, at what time to interfere and put an end at once to the whole cause of the trouble. He thought that often physicians wait too long and the patient is lost. So that he should advise the interference as soon as it is found that the remedies are not having the proper effect and the patient is gradually going down-hill. The womb should be emptied by dilatation. He attempted to use the cocaine and was very badly frightened. The first time he ever gave a dose of cocaine he gave $\frac{1}{10}$ of a grain and thought the patient was certainly gone. It It is a dangerous remedy to use in a case like that; he should not attempt it again.

Dr. Anderson had not expected to say all that could be said in a paper of ten minutes, but so far as he knew it covered the ground as to treatment of these troubles. Of course, all the remedies that are recommended should be used to assist in the digestive process. The nourishment of the patient has to be kept up as much as possible. In his case last summer the stomach became so irritable it would not take in anything, and he nourished her by beef peptinoid powder in the rectum and stopped putting anything in her stomach for two or three days. She said that in a half hour after she would take one of these injections she would feel like she had eaten a meal, and pretty soon after he began to make the caustic applications through the neck and she began to improve. Up to that time he had used everything he could think of and everything that the books and journals had ever said would do any good. He believed, as it seemed that all did, that the cause lay in the womb or about it, and that there is the place to go to permanently relieve the patient. And after these applications have been made and all remedies tried then, as Dr. Haigh had said, it is time to go to the ovum and take out the cause.

DEATH UNDER NITROUS OXIDE GAS DUE TO TIGHT-LACING.—More than one fatality from tight-lacing has recently been noticed in our columns (*Lancet*). In all conditions in which free respiration becomes a necessity, if the vital processes are to be carried on, tight-lacing means death. Of all states that in which a patient takes an anesthetic is the one when absolute freedom of breathing is a necessity. Unhappily, but few know this elementary fact in physiology, and hence the sad death of a girl who had taken nitrous oxide gas at a dentist's rooms, and, while recovering from its influence, had a fatal attack of syncope. The statement is made that her stays were five inches too small for her natural body, a disparity of shape which, we imagine, the dentist might have seen and acted upon before he ventured to give the unfortunate girl nitrous oxide gas.—*Ex.*

Society Reports.

NORTH CAROLINA BOARD OF HEALTH.

Conjoint Session with the North Carolina Medical Society May 15th, 1895, at Goldsboro, N. C.

The Conjoint Session was called to order at 12 o'clock by the President, Dr. Geo. G. Thomas, of Wilmington.

The President stated that the expiration of the terms of Dr. W. H. Harrell, of Williamston, and Dr. John Whitehead, of Salisbury, made it necessary to go into an election for members to fill their places.

Dr. W. H. Harrell, of Williamston, and Dr. John Whitehead, of Salisbury, were unanimously elected to succeed themselves in office.

Dr. R. H. Lewis, the Secretary, read his report.

Dr. Haigh said that in his section of country there had been a great deal of interest taken in sanitation, and especially in regard to the supply of water. Of late years the malarial cases had assumed a more serious form, that of hemorrhagic fever. The simple driven pump is not having the full effect expected, that is, not giving freedom from surface water. He wished all the information he could get upon the subject. He had never seen the people take more interest in matters coming from the State Board of Health. He was sure that the profession would help the Board in every way in distributing these tracts.

Dr. Booth was glad that the Board was holding meetings round through the State, and he thought that the Board was doing a great work.

The report of the Secretary was received.

Dr. Geo. H. West presented, through the Secretary, a paper on the "Influence of Water on Malarial Fever." It was read by title and referred.

The Secretary stated that Dr. West reported his experience as a physician to the convict camps on the Roanoke river. He had found a marked difference in the amount of malaria caused from the driven pump and the open well. The desire is to get through the impervious layer of marl and clay; but he had found the malaria very much diminished about 25 or 30 feet deep, but not through the marl or clay. He reported a letter he had gotten from Dr. Whitaker, the County Superintendent of Jones county, of Trenton. Dr. Whitaker said in his letter that Trenton was situated on a ridge, with the river one one side and a mill-pond on the other. The people on the ridge rarely ever suffered from malarial troubles, but there was one well on the slope—the people who drank from it suffered very much from malarial diseases. The dam of the pond broke in the spring and was not repaired until the following fall, and the bottom of that pond lay exposed to the suns of summer on the South side of the town during the entire season, and there was no increase whatever in the amount of malaria in the town. Dr. Whitaker himself and others fished in the little pools without the slightest hesitation and never had any malarial fever. He said that afterwards something got the matter with the mill and the owner turned off the water in order to repair his mill, and the consequence was deep indignation on the part of the people of Trenton; but, instead of an increase in the amount of malaria during that August and September, if there was any difference at all, there was less than there was before.

The President reported a series of cases from Jacksonville, N. C., bearing upon this question. The town is practically enclosed by New River; it is in Onslow county. On the point of this peninsula is situated a large saw-milling plant. These patients (all young men), having been warned of the dangers, had used Apollinaris and other bottled spring waters. All of the water was absolutely protected, but they had frequent and severe attacks of malaria. He suggested to these young men that, in addition to the care they exercised, they insist upon their cook boiling every day the water used in cooking their food that came from a well outside 140 feet deep. It went down through the mud layer and the layer of sand and layer of clay. So far the experiment of boiling the water has done very well. One of the young gentlemen has had an occasional outbreak of malaria. There has been no sign of an outbreak since the boiling began.

Dr. O. McMullan said that he had read Dr. Lewis' pamphlet. His experience ran back some twelve years or more in the eastern part of the country, and it went to show that malarial troubles were greatly diminished in 1884 and 1885, when there were very little. Frequently through whole years only four or five cases are heard of. The people all improved when the open wells and springs were first substituted by driven pumps; but the chills are all coming back again. In the year 1893 there was a decided change, and in the spring the people all over the country began to have chills. He thought that there must be some fallacy in the theory that the water was the cause of the chills and fever.

Dr. Sikes wished to corroborate what had just been said. In the year 1882 nearly everybody in the hill country had chills. Then they had no more chills, except a few up and down the border of a swamp, until 1894. They did not have any pumps nor make any change, drinking the same water and exposed to the same causes all the time. Chills come in his country by epidemics.

Dr. Duffy did not wish to detract anything from the importance of a good supply of drinking water, but he did wish to say something in favor of bad air as a possible cause. He related the history of a set of cases that fell under his observation last year. At a place five miles from Newbern, known as Fay's Mill, the pond had become dry and had been so for several years. A stream of water ran through the bed. A family lived there on the verge of that mill-pond and drank from a spring that ran from a rock. That was the only water they used, and the most malignant case of malarial fever that he saw during that year was in that family. One patient was totally unconscious from having convulsions. Fortunately, he had a supply of Sharp & Dohme's bimuriate of quinine for hypodermic injection, and he recovered. There were a number of cases in that family. While he did not think that the importance of good wells could be exaggerated, still he thought that an eye ought to be kept on bad air also.

Dr. Lewis said that those who had read his pamphlet would bear in mind that he did not commit himself entirely to the water theory, but at the same time it was written from the point of view of an advocate, and that he had deliberately overlooked, so far as he could, any evidence on the other side. He did it because, if the people were given any avenue of escape they would take it, and he left out a good deal of evidence on purpose.

He was surprised to note that the word cistern had been left entirely out of the discussion. He was a stronger advocate of the cistern than of the driven well, but failing the cistern, he advocated the driven well.

Dr. Lewis was asked if he thought the malarial germ could go seventy-five or eighty feet below the surface.

He said he believed it not impossible for the germ to go down the side of the pipe.

Dr. Pate said that there are other things about the well beside malarial poison. The old bucket and the old sweep system are very frequently the cause of the infection of the water by typhoid fever and other germs. It was almost impossible to get a wash-woman who would not go and wash the poison from her hands into the well by handling the chain or pole after they had been infected by the soiled clothes. He was sure that he had seen cases of typhoid fever arising from that source, and he recommended the bored well to prevent that infection as well as others.

Dr. Haigh asked about the reports of health from the different counties. The death-rates of several small places had been so high that they attracted his attention, and he asked if there was any special cause?

Dr. Lewis, in answering, read the reports and explained that the death-rates appearing monthly in the *Bulletin* were merely temporary. Many of the returns were worthless on account of the town authorities not taking proper care to render the reports accurate. In one town there are some 3,500 negroes, and months and months will pass without a single death of a negro reported. That is because the regulations in regard to reports of deaths are not carried out. The only way to make the statistics accurate is not to allow a dead body to be removed until a death certificate has been signed by a physician or a magistrate. A report under 12 per cent. he considered worthless.

The President did not consider the statistics as worth anything, but could see no way at present to enforce the laws. Many valuable points could be brought out in a very simple certificate. It ought to cover, not only the age and race, but the place of birth and how long the person had resided in the place of his death. It would affect the sanitary history of a town very materially. A person coming to a town and dying in a month of something contracted before, affects the death-rate of a town and its sanitary history very injuriously.

That brings up another very important subject—that of acclimatization of foreigners. In looking over the deaths from yellow fever he had noticed that Germans died more rapidly than any others. A great many people died of so-called bilious fever of the type in Wood's Practice.

Dr. Guiteras, in studying the nature of the fevers of the South, believed some of these were cases of yellow fever unrecognized, and he says that a large portion of the proof is based upon the fact that newly arrived emigrants died of it.

The Conjoint Session then adjourned.

GEO. GILLETT THOMAS, M.D., President.

RICHARD H. LEWIS, M.D. Secretary.

Lactic Acid in Epithelioma of Face.—Dr. Bloom (*Jour. of Cutan. and Gen.-Urin. Dis.*) reports the case of an extensive epithelioma treated with lactic acid. After abandoning the suggestions of operation, curetting and caustics which naturally presented themselves, he remembered the claim of Von Mosetig Moorhof for lactic acid in cancer. He had used it without good result in a former case, but believing the application then was faulty, determined to try it again. The treatment consisted of pure lactic acid and silicic acid made into a paste and applied. It was probably about fifty to sixty per cent. strength. The first application was made, and I saw the patient again at the end of the week. He said that he suffered very little pain, much less than what he had been led to expect. We then increased the strength, making the paste more fluid, and applied it, which caused some pain, but at no time was the pain very severe. This paste was applied faithfully once a day. The surface of the sore commenced to granulate, the walls broke down like magic, and it almost seems like exaggeration when I say that the result was a perfectly clean cicatrix. The patient was discharged January 2, 1895, from all further observation, and there is a perfectly clean cicatrix about the size of a penny; it is smooth and somewhat reddish, of course, but the smoothness and non-elevation are characteristics to which I would call your particular attention. I speak of the case because that method of application, so far as I know, has not been in practice here. Six or seven weeks from the first application the man has got entirely well. The result was absolutely perfect. I hope this will stimulate others to put the method into use, and I believe they will have similar results.—*Medical Review.*

NORTH CAROLINA MEDICAL JOURNAL.

ROBERT D. JEWETT, M.D., EDITOR.

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Editorial.

Exit Index Medicus.

It is with much regret we note the fact that the publishers have been forced to terminate the exisence of this very useful publication. Mr. Geo. S. Davis took charge of the *Index* in 1885, and ever since that time there has been an annual deficit of from $500 to $1,000, which Mr. Davis has had to bear. The deficit has been growing lately, however, and a few months since an appeal was made to the profession to come to the support of the publisher. Mr. Davis generously offered to continue the publication if the deficit could be reduced to $500, being willing to make that contribution to the cause of science, but after an organized effort to increase the subscription list, it was seen that the shortage for 1895 would amount to about $2,000, and Mr. Davis felt obliged to discontinue the publication.

In the words of one of the leading journals of the country, "The suspension of this most valuable periodical is a national misfortune; it is moreover a disgrace to the medical profession of the country." The *Index* filled a place of truly great importance to the medical writer, and will be sorely missed. In view of its failure there is little probability that another effort will soon be made to establish such a record of the published work of the profession, and in the interim these data will be scattered and lost sight of. The suspension of this valuable work is truly a national misfortune and a blow to the pride and patriotism of the American profession.

The Wilmington City Hospital.

The report of the Superintendent of this Institution, Dr. W. W. Lane, for the past year shows that the record of the Hospital has kept up to that of former years. There has been no increase in the number of beds, but there has been a very satisfactory increase in the number of patients, both pay and charity. The former come largely from the neighboring counties and from South Carolina. There were admitted for treatment 202 charity patients, with 12 deaths, and 68 pay patients, with 3 deaths. The Superintendent recommends some improvements which should be made at once—in fact, should have been provided long since. The heating of the Institution should be by steam, and after the first outlay this system would be found to be but little, if any, more expensive than the present, and would give far more comfort to the patients. An ambulance is one of the things asked for, and should be provided at once. We are pleased to see a general appearance of improvement in various directions about the Institution, as it shows that the aim of the Superintendent and of the Board of Managers is upward.

Reviews and Book Notices.

The Year Book of Treatment for 1895. A Critical Review for Practitioners of Medicine and Surgery. Twenty-three Contributors. Cloth; octavo; pp. 490. Lea Brothers & Co., Philadelphia; 1895,

To glean from the great mass of medical literature for a year that which is of value is a task as laborious as it is difficult. This the author has tried to do in this eleventh issue of the Year Book.

The whole range of general and special diseases is gone over and new ideas of treatment, as advanced by various writers in different parts of the world, is noted. Of course in so small a volume all that is good has not been included, nor, on the other hand, has all that will prove of little value been eliminated, but, taken on the whole, the work will prove of much value in suggesting lines of treatment where one is put to his trumps by some especially tough case. The book is illustrated where necessary to elucidate the text.

A Manual of the Modern Theory and Technique of Surgigical Asepsis. By Carl Beck, M.D., Visiting Surgeon to St. Mark's Hospital and to the German Poliklinik of New York City. With sixty five illustrations in text and twelve full-page plates. W. B. Saunders, Philadelphia, 1895. Cloth. Price $1.25.

In issuing his New Aid Series, of which the present volume is one, Mr.

Saunders has struck the happy medium between the compend and the text-book. These little volumes will prove of much value, not only to the student, who desires to run over rapidly what he has learned in the more pretentious text-books, but to the praaticing physician as well, when he desires to refresh his mind on certain branches.

The volume before us is clearly written and gives with emphatic detail the points necessary for obtaining and maintaining asepsis. It includes a section on laboratory technique, and is about the most satisfactory book on the subject of asepsis that has come to our notice.

Subscribe for this JOURNAL—$2.00.

Correspondence.

Editor N. C. Med. Journal:

I take pleasure in announcing that The G. H. Harvey Co., Manufacturers of Drugs, Chemicals and Surgical Instruments, of Saratoga Springs, N. Y., generously offer a second annual prize to the applicant making the next highest grade before the Board of Medical Examiners. The prize to be awarded is a case of handsome design and durable finish filled with pills and tablets of their manufacture. This case will be a valuable acquisition to any young man who begins the practice of medicine.

This year the prize will be given to Dr. Charles L. Minor, of Asheville, who was $\frac{1}{7}$ behind Dr. Lee Cohen, winner of the Appleton Prize on a grade of $97\frac{4}{7}$.

L. J. PICÔT, M.D.

Littleton, N. C., June, 15, 1895.

Abstracts.

THE NATURE OF SO-CALLED FOLLICULAR TONSILLITIS AND ITS RELATION TO INFECTIOUS DISORDERS.—Dr. Norris Wolfenden (*Jour. Laryn. Rhinology and Otology*), after reviewing Socolowski's anatomical and histological studies of common hypertrophy of the tonsils, of chronic follicular tonsillitis in which one or more cheesy masses may usually be expressed from the crypts, and of the acute process which frequently is engrafted on the previously existing chronic follicular disease (designated by the cumbrous term *tonsillitis lacunaris chronica desquamativa exacerbata*), proceeds to a consideration of "acute cryptic tonsillitis," termed by Socolowski *tonsillitis lacunaris pseudo-membranacea*, which answers to Bosworth's "croupous tonsillitis," and which is the "angina follicularis" of the preceding abstract.

The association of various micro-organisms in different forms of this disease is described as in Dr. Sendziak's paper, and, following Bulloche, an attempt is made toward a clinical differentiation between the staphylococcal and streptococcal forms which Sendziak was unable to do:

Staphylococcal Throat.—False membranes, soft, slightly adherent, grey-yellow color. Fever, pain and swelling of submaxillary glands. The disease runs a sharp course and recovery is accomplished in less than six days. If suppurations occur, they have a tendency to remain localized.

Streptococcal Throat.—Sudden, sharp fever, with or without a rigor, but possibly coming on insidiously. False membranes appear on a tonsil, then invade the palatine pillars and uvula so as to cover them like the fingers of a glove—a sign supposed formerly to be distinctive of diphtheria. Membranes whitey-grey, adherent, surrounding surfaces more inflamed than in diphtheria, although the membranes are less elastic and more friable. Enlargement of the submaxillary glands, swelling of the face, coryza; in severe forms rapidly increasing prostration, high temperature and albuminuria. Death may occur. Loeffler bacilli absent. Lesions of visceral organs may follow, e. g., endocarditis, swelling of joints, orchitis, ovaritis, enlargement of the spleen, etc. It seems to be a question of the activity of the streptococci; when they are few and develop but little, we have a purely localized process, but when they develop rapidly we have a breaking-down of the resistance of the tonsil and a general invasion of the system.

Pneumococcal Throat.—The symptoms are less definite; only two cases observed. Sudden attack, with rigors and pronounced fever and exhaustion. Membrane on the tonsils and uvula; œdema of the neck. Only the Fraenkel-Talamon pneumococcus was present. Pneumonia may accompany or follow this form of angina (Rendu). "It has been proved that the pneumococcus may produce suppurations in various parts of the body, pleuritis, meningitis, ulcerative endocarditis, otitis, etc., in patients who have never at any time suffered from pneumonia."—*Medicine.*

OCCIPITO-POSTERIOR POSITIONS.—Dr. Van Peyma, Buffalo, concludes an article on this subject as follows (*Buffalo Med. and Surg. Jour.*): In conclusion, I wish to emphasize the vital importance of recognizing the position in vertex presentations; to insist that, as a rule, cases of occipito-posterior position should be left for the natural forces to effect delivery—forces which, in the vast majority of cases, are not only entirely adequate, but in these cases will accomplish the object better than the most skilled instrumental or manual interference. Further, I desire to maintain that flexion is essential to natural rotation; that rotation is frequently delayed until the head is very low; that the character of the pains is a very important factor; that with complete anæsthesia the mobility of the head, even when deep in the excavation, is often quite surprising; that in occipito-posterior position the blades of the forceps must be applied well forward to insure a firm hold; and that, after the head reaches the perineum, extreme flexion must be obtained until the occiput has passed over the perineum; and lastly, that no hard and fast rules can be formulated to cover all cases, but that much must necessarily be left to the judgment of the operator, based on a consideration of all the conditions involved.—*Can. Prac.*

FISTULA IN ANO.—In doing a radical operation for fistula the following points, according to Dr. J. H. Bacon (*No. West. Med. Jour.*), should be observed:

1. Never sever the sphincters at more than one place at the same operation, no matter what the complications may be, otherwise incontinence is sure to follow.

2. Unless all the channels followed up and laid open the operation will fail of its purpose.

3. Fistula resulting from tubercular abscess must not be operated upon if there is sufficient tissue destruction of lung to produce hectic, fever, sweats, etc., unless the fistula is causing severe painful spasms of the sphincters, then it should be divided at any stage.

4. After laying the fistula tract open the wound must be made to heal from the bottom, and as the cutaneous or mucous side of the wound is better nourished, it will throw out a more healthy granulation, that tends to bridge over and close the slower granular surface at the bottom, thus leaving a fistula remaining.

5. When the fistulous tract is not too complicated it should be dissected out entire and the wound brought together, beginning at the bottom with continuous catgut sutures and approximating the surfaces in successive layers until the whole wound is closed.

TREATMENT OF TUBERCULOUS AFFECTIONS OF THE KNEE-JOINT.—Dr. Horace Manchester Brown (*Int. Med. Mag.*) thus sums up the points in the treatment of these affections:

1. That tuberculous disease of the knee-joint calls for treatment, the principle upon which that treatment depends being the same as that for any other condition in any part of the body in which there is existing as an exciting cause a microbic infection which is capable of producing either local or general retrograde metamorphosis of tissue.

2. It is also essential that the general condition of the patient in this disease should receive the most careful attention, inasmuch as the tendency of the disease, affecting, as it does, the largest joint synovial surface in the body, is towards rapid production of general sepsis and also rapid diminution of general resistance to septic infection.

3. That, while the contents of the knee-joint after perforation from a caseous focus in the epiphysis of the femur is not true pus, but, on the contrary, broken-down tissue containing tuberculous matter, there may at any time take place an infection of the joint from the development of staphylococci or streptococci, which may produce a general septicæmia.

4. All hope of successful treatment with the idea of preventing retrograde metamorphosis of tissue after a tuberculous infection has taken place in the bone will depend upon extremely early diagnosis, operations, rest and improvement of the hygienic conditions.

5. All pus collections, whersoever they may form as the result of infection of tuberculous material with pus cocci, should be evacuated, drained, disinfected and curetted.

6. Early operation is indicated upon tuberculous abscesses occurring in the ends of the bones, and suspicion should be attached to any continued pain in the epiphyseal region in children after injury, which does not disappear after a few weeks of rest.

7. Immobilization of the knee, but not by means of plaster dressings, is indicated in all suspicious cases of osteitis occurring in the neighborhood of the joint.

8. An attempt should always be made to bring about progressive metamorphosis of tissue by injections of iodoform emulsions, either in glycerin or ether, when the progress of the disease has not been so great as to indicate that the intrascapular tissues are entirely destroyed.

9. Arthrectomy and arthrotomy are contra-indicated in cases where excessive emaciation and extreme anæmia, or the occurrence of foci of tuberculous disease in distant organs, indicate that there is a general condition of tuberculosis.

10. Arthrectomy or orthrotomy is indicated when the disease seems to be limited to the joint or the pericapsular tissues, and when the patient's condition is such that it is safe to believe that the shock of the operation can be withstood. Great care is to be exercised in attempting to break up an anchylosis, lest the disease, not entirely eradicated, be started anew, or new fractures be produced.

11. Amputation is indicated when the disease shows no tendency to local improvement, and the progress of the disease is rapid and manageable, as in the liquefying form of tuberculosis.

OBSERVATIONS ON THE INFLUENCE OF INSOMNIA.—Marie de Manaceine (*Arch. Ital. de Biol.*, 1894, p. 322) has experimented with ten young dogs, of ages ranging from two to four months, on the effect of complete loss of sleep, with the following interesting results: Four dogs died in from 92 to 143 hours. The temperature decreased during the first twenty-four hours 0.5° to 0.9° C., and before death 4 to 5 degrees. The reflexes were weak and the pupillary reaction slight. The number of red blood-corpuscles fell from five millions to two millions, but in the last twenty-four hours they increased. Contrary to the observations made on dogs starved to death, the brain was in all cases most affected. Many of the ganglionic cells showed fatty degeneration, and the vessels were surrounded by a thick layer of white blood-corpuscles. Small capillary hemorrhages were found on the outer layers of the hemispheres, and larger ones in the optic nerve and optic thalamus. The body-weight decreased 5 to 13 p. c.

It is of clinical importance to note that after a loss of sleep of 96 to 120 hours it was impossible to save life, even when the bodily heat was kept up and artificial feeding was resorted to.—*Medicine.*

DIAGNOSIS AND TREATMENT OF TERTIARY SYPHILIS.—(Wm. S. Gottheil, M.D., *Med. Bulletin*, Vol. xvii., No. 4, April, 1895). In the treatment of tertiary syphilis iodine and its compounds are mainly to be relied upon, but mercury fulfils an important indication and cannot be omitted. The ordinary treatment with iodide of potassium is usually sufficient, though very frequently the dosage is entirely too small. Patients with gumma frequently do not respond to ordinary doses, and it must be pushed to an extent that is limited only by the endurance of the patient's stomach. All the devices of the recumbent posture, counter-irritation over the epigastrium, the administration of the drug in milk, and with ice, must be employed to get as much as possible of the drug into the system; and the rectum, which absorbs the iodide very well, must be called to our aid. The iodide of sodium is sometimes borne when the potassium salt is not. Or the new iodide, that of rubidium, may be used. It costs more than the commoner salts, but that is a thing hardly worth considering when it is a question of saving tissues and organs from destruction. It has not nearly the disturbing effects on digestion that the potassium and sodium salts have, and it can therefore be borne in larger doses. Dr. Gotthiel has not observed the disturbances of the circulatory apparatus and the depression of the heart, which are so baneful when large doses of potassium iodide are exhibited. It is a valuable addition to our armamentarium in these tertiary-syphilis cases.

Coincidently with the iodides mercury must be employed in small doses, and in bad or refractory cases the employment of the soluble salts by hypodermic injection is an important and valuable resource.

As regards the local treatment, its main lines are as follows: The non-ulcerated gumma should be covered with mercurial plaster, even when fluctuation is distinctly apparent, since resorption takes place sometimes even under those circumstances. If ulceration has occurred, iodoform in the shape of a powder or an ointment is to be used.

If, however, the destructive process is active, and the gummatous ulceration advances in spite of our efforts, it is proper to attempt to stop it by an energetic cauterization of the infiltration that forms the advancing margin of the gummatous sore. In exulcerating gummata of the trunk and the extremities caustic potash in stick should be freely employed, the tumor tissue being thoroughly bored into and cauterized. For the smaller ulcerations of the face, buccal cavity, etc., the nitrate-of-silver stick can be employed in the same way.

It is of the greatest importance, in these localities, to stop the ulcerative process as soon as possible; and if necessary either the Paquelin cautery or the galvano-caustic point should be employed.—*Int. Med. Mag.*

RESULTS OF AUTOPSIES IN CASES DYING AFTER Treatment with Diphtheritic Antitoxin.—(Geo. P. Biggs, M.D., *Med. Record*). Eighteen autopsies were included in this report, fifteen of the cases having showed involvement of the larynx. Diphtheritic membrane was found in only twelve cases, in four of which it was limited to the pharynx, larynx and upper trachea, in six it covered the pharynx and tonsils, in two there was deep necrosis of the tonsils. Enlargement of the cervical glands was usually present. Parenchymatous and fatty degeneration of the heart, liver and kidneys was constantly found, and was more advanced in cases which came late under treatment. The antitoxin, when administered early, checked and prevented destructive changes. Complicating lesions were most common in the lungs. Bronchitis existed in every case, twelve showing purulent secretion with intense inflammation of the bronchial and peri-bronchial structures. Distinct membrane was found in the bronchi in only one case. Pneumonia was present in all except two. The consolidation was lobar in one instance and lobular in the remaining number. The percentage of broncho- or lobular-pneumonias was 88, a proportion much higher than that usually given. This fact would tend to show that the improvement in mortality under the antitoxin treatment of diphtheria is due to its influence on cases not complicated by broncho-pneumonia. Acute fibrinous pleuritis complicated two cases; acute exudative nephritis was found in two, and in each instance the patient did not receive antitoxin until the seventh day of the disease, and death occurred two days later. The spleen was usually found congested. The lesions of antecedent disease were chiefly of a tuberculous character, five of the autopsies revealing marked tuberculosis. Syphilitic cirrhosis of the liver was marked in one case and slight in another.

The average age of the patients was two and a half years, the eldest being five and a quarter years, the youngest eight months. The duration of the disease prior to the administration of the antitoxin averaged 4.4 days. The immediate cause of death in sixteen of the eighteen cases was diphtheria or some of its complications. Two cases were complicated by general miliary tuberculosis; two patients were dying when they entered the hospital; two were treated with serum of an inadequate strength, and one did not receive any. The nine cases remain for consideration as to the apparent failure of the antitoxin treatment. Two of this number died of extensive broncho-pneumonia, the death of a third was caused by fatty degeneration of the heart, acute exudative nephritis, and the septic condition of the patient when admitted to the hospital. In six cases there was laryngeal involvement requiring intubation, and all were complicated with broncho-pneumonia.

The writer makes the following deductions:

1. That antitoxin has a decided influence in loosening diphtheritic membrane, even in cases resulting fatally.

2. That it has comparatively little influence on the cases already complicated by broncho-pneumonia.

3. That it has a marked influence, when administered early, in preventing and checking parenchymatous and fatty degeneration.—*Ibid.*

RATIONAL Therapeutics of Cholera Infantum.—Gustavus Blech, M.D., (*N. Y. Med. Jour.*). A general plan of treatment may be oulined: First, remove, if possible, the disturbing causes; second, treat symptoms which *per se* are liable to endanger the life of the patient; and third, sustain vitality.

The therapeutics, which is based upon the ætiology and pathology of a given case is the only one to be employed.

Now, the ætiology of cholera infantum is not so obscure as asserted by a good many authors. Whether or not of microbic origin, one thing is sure—it is due to a chemical decomposition of food, causing an inflammatory condition of the digestive and alimentary canal.

Clinical experience, furthermore, shows that this disease is of a grave character, producing death in a large proportion. Heat *per se* is not the immediate cause of this disease, but it influences its course considerably. Therefore, gastric or intestinal disturbances in summer demand a closer attention than those which occur during the colder season. Cholera infantum is a disease met even in the palaces of the rich, although not so often as in the tenement houses of the poor, which fact proves again that bad air, filth and lack of ventilation are also of a predisposing influence, as well as an obstacle to a quick cure. The mortality in the tenement houses is larger than that of the richer parts.

As soon as called to a case of cholera infantum, prohibit for the first day any food whatever. Mothers have no right to nurse the little patient either. Strict instructions must be given in that direction, because the timid mothers are often inclined to quit the crying babies by putting them to the breast.

Remedies are of very little value. Beginning with calomel, salol and all the newer antiseptics, finishing with subnitrate of bismuth—they have all proved a failure, for none of them work quickly enough.

The treatment as outlined by Dr. Elmer Lee, of Chicago, in his cases of typhoid fever, proved a success in my hands during last summer, and under this treatment I have lost only one patient out of twenty-three, while the monuments of my skill exercised during the year 1893 are decorating the cemeteries of the State of Connecticut.

So far as I knew, the best antiseptic (which has also a strong tendency to reduce local inflammation) was peroxide of hydrogen (medicinal) until hydrozone was used by me. Hydrozone being twice as strong as Marchand's peroxide of hydrogen (for economical reasons), the latter drug is preferred by me. This remedy can be administered internally as well as externally.

I add a tablespoonful of hydrozone to a pint of water for washing out the stomach. The vomiting ceases after the first washing, as a rule. If necessary, this procedure can be repeated. If the vital power of the little patient is not too low it can produce no harm. But in every case, no matter how far advanced, I do not omit an irrigation of the bowels, for which purpose I use a soft rubber catheter attached to a common bulb syringe. The catheter is introduced as high in the colon as possible. It is unnecessary to say that the water must first be sterilized. I do not agree with Dr. Lee in using hot soap water. On the contrary, I use cold water, and add to each quart about two ounces of hydrozone. The improvement after the first or second irrigation is marked. If necessary, these irrigations can be repeated every two hours.

Among other remedies there are only two to be employed—morphine and strychnine. Both ought to be administered hypodermically. Their indication is too well known and they are about all we need. No antipyretics should be given. If the fever is very high and if the irrigation of the bowels does not reduce it, the whole body should be washed with alcohol.

The diet for the next twenty-four hours should be very light indeed. Sweet, strong Russian tea is all I allow.—*N. Y. Med. Jour.*

FRESH FRUIT in Chronic Dysentery.—Dr. Arthur D. Butts (*British Med. Jour.*) calls attention to the beneficial action of such fruits as strawberries, grapes, figs and tomatoes, if the last can be classed as fruit. These represent the seed fruit as distinguished from stone fruits. Of course the fruit must be in perfect condition. He has had considerable experience with them for several years in the treatment of chronic dysentery and diarrhœa, with the most happy results.

OFFICIAL LIST OF CHANGES IN THE PUBLIC SERVICE.

THE ARMY.

From June 12, 1895, to June 26, 1895:

Bradley, Capt. Alfred E., Assistant Surgeon, will be relieved from duty at Fort Custer, Montana, upon the arrival there of Major Wm. C. Shannon, Surgeon, and will report for duty at Fort Yellowstone, Wyoming, relieving Capt. Charles M. Gandy, Assistant Surgeon.

Captain Gandy, on being thus relieved, will report for duty at Washington Barracks, D. C.

Lewis, 1st Lieut. W. F., Assistant Surgeon, is granted leave of absence for two months and twenty-three days to take effect on or about July 6, 1895.

Pilcher, Capt. Jas. E., Assistant Surgeon.—The leave of absence on surgeon's certificate of disability, granted Captain James E. Pilcher, Assistant Surgeon, is extended four months on surgeon's certificate of disability, and permission granted him to go beyond sea.

McCreery, Capt. George, Assistant Surgeon, will be relieved from duty at Fort D. A. Russell, Wyoming, and will report in person to the Commanding Officer at Fort Niobrara, Nebraska, for duty at that post.

Richard, Capt. Chas., Assistant Surgeon.—The leave of absence for three months, to take effect when he shall be relieved from his present duties, on or about June 30, 1895, is granted Captain Charles Richard, Assistant Surgeon.

Wyeth, Capt. Marlborough C., Assistant Surgeon, is granted leave of absence for two months, to take effect the latter part of August, 1895.

Clarke, Capt. Joseph T., Assistant

Surgeon, is relieved from duty at Fort Omaha, Nebraska, and ordered to Fort Washokie, Wyoming, for duty, relieving Captain Henry I. Raymond, Assistant Surgeon.

Captain Raymond, on being relieved, is ordered to Fort Niagara, N. Y., for duty at that post.

Captain Philip G. Wales, Assistant Surgeon, now on temporary duty at Fort Niagara, N. Y., upon the arrival of Capt. Raymond at that post, will return to his proper station.

Wakeman, *Capt. Wm. J.*, Assistant Surgeon, will be relieved from duty at Fort Thomas, Ky., upon the arrival there of Capt. Robert J. Gibson, Assistant Surgeon. and will, upon the expiration of the leave of absence granted him, report for duty at Fort Huachuca, Arizona.

Perley, *Capt. Harry O.*, Assistant Surgeon, upon the completion of his examination for promotion, will proceed to Hot Springs, Arkansas, and take charge as Commanding Officer of the Army and Navy General Hospital, relieving Lieut. Colonel Alfred A. Woodhull, Deputy Surgeon General.

Lieut. Colonel Woodhull, on being thus relieved, will report in person to the Commanding General Department of the Colorado for duty as Medical Director of that Department, relieving Lieut. Col. David L. Huntington, Deputy Surgeon General.

Lieut. Col. Huntingion, on being thus relieved, will report in person to the Surgeon General for duty in charge of the Museum and Library Division of the Surgeon General's Office, relieving Lieut. Colonel John S. Billings, Deputy Surgeon General.

Pilcher, *Capt. Jas. E.*, Assistant Surgeon, will be relieved from duty at Fort Niagara, N. Y., upon the expiration of his present sick leave, and will report in person to the Commanding Officer at Columbus Barracks, Ohio, for duty at that station.

Brechemin, *Capt. Louis*, Assistant Surgeon, will be relieved from duty at Columbus Barracks, Ohio, upon the return from leave of absence of Major William E. Waters, Surgeon, and will proceed to and take charge at Baltimore, Md., as Attending Surgeon.

THE NAVY.

For the week ending June 22, 1895:

Medical Director A. A. Hoehling is placed on the Retired List.

Medical Inspector G. W. Woods is ordered for examination preliminary to promotion to Medical Director.

Surgeons G. F. Winslow and R. A. Marmion are ordered for examination preliminary to promotion to Medical Inspectors.

Miscellaneous Items.

Under this head space will be given (free of cost) to those paid-up subscribers who desire to change their location, or to dispose of practice or property. One insertion will be allowed, but inquiries must not be ordered addressed to this office.

Any news connected with professional men and matters in North and South Carolina will be appreciated by the Editor.

Dr. Wm. J. Pettus, Passed Assistant Surgeon in the Marine Hospital Service, was married in this city on the afternoon of June 27th, to Miss Daisy Caden Peter, of Texas.

The London correspondent of the *Medical News* gives the amount of the estates of several prominent medical men who have recently died. The largest estate was left by Dr. Francis

Bisset Hawkins, who was nearly one hundred years old. It was estimated to be about $660,000, but was mostly inherited. The writer says: "The quarter of a million left by Clark, and the still larger amount left by Gull, were only partly made by the practice of medicine. Both these successful physicians numbered among their patients mighty men of finance, who acted as their pilots amid the treacherous shoals and currents of the money market. The average British doctor, whether in town or country, as a rule, leaves little beyond the amount of his life-insurance and the 'good-will,' whatever that may be worth, of his practice. The average net income of physicians throughout the country probably does not exceed £500 ($2,500).

William Henry Schieffelin, the senior member of the well-known firm of W. H. Schieffelin & Co., druggists, of New York City,, died June 21st. Mr. Schieffelin was nearly fifty-nine years of age, having been born in New York City August 20, 1836. The house of which he was a member recently celebrated their hundredth year in business by issuing a pamphlet giving a history of the business. Besides being a highly successful business man, Mr. Schieffelin was strictly religious, and was a member of the Brotherhood of St. Andrew, a body organized foı work among young men.

The twenty-first annual meeting of the Mississippi Valley Medical Association will be held in Detroit, Mich., during the first week in September—Secretary Dr. F. C. Woodburn, Indianapolis, Md.

A DANGEROUS POPULAR ANTISEPTIC.—The popular knowledge that carbolic acid is an antiseptic is productive of a great deal of harm. The fact that it was the first antiseptic employed by Sir Joseph Lister in wound treatment has been in many ways unfortunate for the human race. Surgeons have until recently regarded it as indispensable to have their instruments in a tray of carbolic solution, which, if strong enough to sterilize the instruments, destroyed the surgeon's hands for practical purposes; and if, as was usually the case, it was so weak as not to actually burn in the hands, did no good as an antiseptic—circumstances which were bad for the patient, the surgeon and all concerned. The disadvantages of carbolic acid, however, can be best seen in out-patient clinics, whither patients continually come with the skin of their hands parboiled and peeling off, exposing the raw subcutaneous tissue more or less eroded by the carbolic acid which a kind friend has advised them to use for a slight cut, or burn, or abrasion. The desirability of ascertaining the strength of what they are using does not occur to them. They are the victims of popular "Listerism" in its most primitive form. If the lay mind could only be made to appreciate that carbolic acid is always dangerous and seldom efficient as an antiseptic, a great deal of unnecessary suffering would be prevented.—*Boston Med. Surg. Jour.*

WHY PHYSICIANS USE AN "R."—A woman of an investigating turn of mind started out the other day to discover why physicians begin their prescriptions with the letter "R." Well, she found out, but it took time and caused her some trouble. It seems that during the middle ages, when astrology was in fashion, a character very much like our "R." was the sign of Jupiter, the preserver of health. The physicians, being then equally devoted to the science of medicine and astrology, invariably began their prescriptions with the following words: "In the name of Jupiter take the following doses in the order set down hereinafter." In the course of time this formula was abbreviated, until at present only the letter "R." remains to teach us that the medical art was once associated with the science of the stars.—*Boston Traveler.*

To Remove Nitrate of Silver Stains.—Hahn recommends the following mixture for this purpose: bichlorid of mercury, chlorate of ammonia, each 5 grams, distilled water 40 grams. The stains are touched with a piece of cloth dipped in this mixture, and then rubbed. The spots, even if of long-standing, disappear almost instantly, on woollens, cotton or linen. Stains on the skin may be removed by the same method. They first assume a yellowish-white color and then completely disappear.—*Ex.*

The death is announced of Dr. Verneuïl and of Professor Huxley.

Don't forget to mention the North Carolina Medical Journal when you write to advertisers.

In our next issue we will commence a series of foreign letters from a special correspondent, which will give an account of professional matters in the great cities of Great Britain and the Continent. They will prove of much interest.

Dr. Lewis A. Sayre has been elected an honorary member of the Société Belge Chirurgie. A well deserved honor.

Professor Trendelenburg succeeds Professor Thiersch in the University in Leipsic, and is himself succeeded by Professor Mickulicz.

Bequest to St. Luke's Hospital.—By the will of the late Rufus Waterhouse the bulk of his estate, amounting to about $200,000, is left to St. Luke's Hospital for the purpose of establishing and maintaining the "Mary S. Waterhouse Memorial Ward" for consumptive sewing women. Mr. Waterhouse was a large manufacturer of men's furnishing goods, His wife, whose name the ward will bear, died of phthisis, aad he saw many of the young women whom he employed stricken with the disease and unable to support themselves. He died a widower and childless. — *Boston Medical and Surgical Journal.*

Medicine in Tokyo.—In Tokyo a recent census has shown that the city contains 2,315 medical men, 70 dentists, 69 veterinary surgeons, 371 pharmaceutical chemists, two city hospitals, three government hospitals and 41 private hospitals.—*Ibid.*

Reading Notices.

The attention of our readers is called to the advertisement of Robinson-Pettet Company, which appears on page 13, of this issue.

This house is one of long-standing and enjoys a reputation of the highest character.

The preparations referred to we commend specially to the notice of practitioners.

The production of Pepsin has occupied during the past few years more attention, greater capital, larger plants and wider knowledge of the whole subject on the part of producers than ever before in the history of medicine. Improved processes, coupled with greater skill, have practically eliminated from this article those impurities to whose intimate association with the ferment itself can be attributed the unwholesome odor and nauseous taste of the various brands of pepsin obtainable only a few years ago. A pepsin free from mucus, practically without odor, perfectly soluble and of at least U. S. P. standard (1:3000) is one that can be expected to give results where pepsin is indicated. To those who want to use a still more active pepsin we suggest S. & D.'sWebber-Pepsin (1:6000). This is one of the ingredients of the same firm's Pan-Peptic Elixir—a deliciously palatable preparation to whioh our attention has recently been called.

The "Best" Tonic—Pabst Malt Extract.—(By W. R. D. Blackwood, M.D.) — During the ever-to-be-remembered Centennial Year I had, amongst other nice people (to say nothing about the nasty ones), call upon me the representative of a firm making a malt extract. After letting him talk to what I thought was a fair amount, I interrupted his discourse by telling him that in my opinion no thin extract of malt was any good. He simply waited till I got through with my talk on the subject, and then asked me if I would not do him the favor of naming several hospitals which would be likely to accept some extract of malt with which to try its virtues. The next day he sent to the hospitals I named from two to a half dozen of cases, each containing two or three dozen bottles. He also sent me a lot, and I found it to be the very best malt extract which had ever come into my hands, and since then I have stuck to it. This "Best Malt" is known to the trade as The "Best" Tonic-Pabst Malt Extract, and is manufactured by the Pabst Brewing Company, of Milwaukee, Wisconsin. It is a long time since I first came into the knowledge of this excelleht brand of malt, and it will be an equally long time (if I live) before I give it up for any other. I believe in the "Best" Tonic as being the best, no punning being intended. For children it is especially adapted, as not being acrid or sour, as tco many of the brands are. It "sets" well on the stomach (as the old woman had it), in weak ladies who reject the ordinary malts. It keeps well, also, which is an item of moment in hot weather. It is economical in cost and is pleasant in taste. Such characteristics ought to make doctors try it, if you don't already know its merits, and such of my readers as have not yet invested in it would do well to find out for themselves what it really is, and I am sure that they will not be disappointed when they do.—*Medical Summary.*

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Original Communications.

ANÆSTHESIA.

By J. G. BLOUNT, M.D., Washington, N. C.

In this grand march of the surgical mind towards the ideal in all things pertaining to that branch, it behooves us all to look well to each feature that will contribute to the attainment of that ideal.

Seeing the advances made in asepsis and antisepsis and the incursions and invasions made with impunity upon the viscera that have heretofore been regarded as sacred and inviolable, my attention is directed to one of the elements that sometimes thwarts our object. While as yet no ideal has been attained to produce that "*profundo sopore*" spoken of by John Calvin in his Commentary on Genesis, yet we are here to-day to discuss the relative merits of the different agents and some of the means available to contribute to the safety in the administration of those agents. Before entering upon that discussion it is fitting and right that we review, briefly, the history of anæsthesia and its growth up to the present. To-day we are familiar with the origin of the term because of the discussions that have occurred recently in the medical journals. About the middle of the nineteenth century Morton, the Boston dentist, while in conversation with the lamented Holmes, was at a loss for a word to express the effect produced by the inhalation of the vapors of the newly found substances. To the quick and fertile mind of Holmes the word *æsthetic* occurred at once as being sensitive, and *anæsthetic*, as being insensitive, easily followed. Letheon was first suggested as the most fitting name for the youngster that was precocious enough to demand immediate baptism, but Morton chose rather etherization and anæsthesia, and these have been held up to the present hour.

In all ages since the origin of man, even before the creation of woman and man's downfall, we are taught the first principle of humanity—that of gentleness and relief of suffering. We find the great Creator first setting the example by causing a deep sleep to fall upon Adam, and it was in this lethargic condition that the first surgical operation was performed—that of the removal of the rib—and "he took one of his ribs and closed up the flesh thereof."

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*Read before the North Carolina Medical Society, May 15, 1895.

Seven hundred years B. C. we find this same divine attribute emanating from the heart of man and the "wine of the condemned" is spoken of by the prophet Amos. Rather than torment condemned criminals this wine, Indian hemp it may have been, was given them, and it was in this semi-benumbed condition that the confessions were extracted from them.

So, also, is it believed by all commentators that our Saviour on the Cross was offed this same wine, and so this divine attribute that was manifested by the All-wise one at his first infliction of physical suffering, has been manifested by that noblest of His works man, and we find our beloved profession to-day struggling, striving, diving into the depths of half-forgotten lore and spending miserable lives in the hidden recesses of musty laboratories still in pursuit of a more ideal method of affording this relief.

As early as the third century, more than fifteen hundred years ago, it is recorded of Hoa-tho, an ancient Chinese practitioner, that he administered hemp for the production of anæsthesia, and in his description of its effects he states that when the drug is swallowed "the mind is immediately filled by a delicious succession of pleasant ideas which banish all cares and produce a perfect indifference to pain," and that "after a certain number of days the patient finds himself re-established without having experienced the slightest pain during the operation."

Herodotus makes mention of burning hemp and that the Massagitæ and Scythians inhale the burning vapors and by them become intoxicated as the Greeks do by wine. So are we all familiar with the Nepenthe of Homer and the "Jove-descended Helen" so drugged the wine as to "free men from grief and from anger and cause oblivion of all ills.

And now, about the thirteenth century, Theodoric, in his Chirurgial, before entering the priesthood, gave most minutely the preparation of the "Spongia Somnifera," which foreshadowed more closely than anything before our present method of producing anæsthesia. A sponge was dipped into an aqueous extract of opium, hyoscyamus, mulberry, hemlock, mondragora, wood-ivy, seeds of dock and lettuce and water hemlock, and this placed in a brazen vessel and boiled away in it until the sponge consumed it all. Whenever needed, this sponge was placed in hot water for an hour and applied to the nostril of the patient to be anæsthetized. If there was difficulty in arousing the patient, another sponge dipped in vinegar or the juice of the root of foenugreek was applied to his nostrils. As late as 1534 we find this

"Spongia Somnifera" still in use and Paré speaks of it as "used formerly" by operators.

And was not the immortal Shakespeare conversant with all these methods, for we know well that the Friar administered to Juliet a potion that "each part deprived of supple government did stiff, and stark, and cold, appear like death."

In 1784 we find Dr. Wilson Moore, of London, attempting to diminish the pain of surgical operations by the application of compression to the principal nerves supplying the part. Malgaigne, the French surgeon, experimented along this same line, but its application was as painful as the operation and soon fell into disrepute. Later, in 1819, Mr. James Wardsup resorted to copious venesection to diminish the sensibility in painful operations, and thought it most suited to persons of a nervous, irritable temperament, and always carried it to the extent of syncope.

Even up to the time of Samuel Gross we find him using complete opium narcosis as a means of producing anæsthesia, and where the patient was sufficiently strong he combined with it a little tartar emetic that the patient might be all the more thoroughly relaxed and insensible. These shared the fate of their predecessors upon the introduction of more modern anæsthesia.

Having reviewed, briefly, the ancient and mediæval history of anæsthesia, and shown that it was first accomplished in the olden times by the divine command, and later by the inhalation of vapors driven off from the "spongia somnifera," drinking solutions of these same extracts, the drinking of narcotic potions, copious venesection, mechanical means and the like, we come down to the substances used to-day and the beginning of their life.

Eighteen hundred, the closing year of the eighteenth century, marked the beginning of the investigation along the line of modern anæsthesia. It was in this year that Sir Humphrey Davy, one of England's most celebrated chemists, while experimenting with nitrous oxide gas, became convinced of its anæsthetic properties. His deductions were early looked upon as chimerical, and his discovery passed into history without practical use being made of it. Dr. Wells. a dentist of Hartford, revived this, and, after due experimentation, on the 11th December, 1844, the first anæsthetic operation was performed, that of extraction of teeth, with Dr. Wells, the discoverer, as the patient. After this many teeth were extracted in rapid succession.

Enraptured, enthusiastic and confident over the success of his discovery, he made known its virtues to Drs. Heywood and Warren, of the Massachusetts General Hospital, and they were to extract teeth before their student body, with members of the class as patients. Unfortunately, however, the bag was removed too soon and the operations were painful. Wells was hissed from the amphitheater, and, with his keenly sensitive nature wounded to the core, he left Boston to give up, for a time, his profession with vexation and disgust. This inhalant again sunk into obscurity and was only revived in 1863.

In 1796 ether was first used in England as an inhalant in certain lung diseases, and in 1805 was used in Boston for the same purpose. Notwithstanding these early uses of ether, we are not concerned with it for its anæsthetic effects until March 30, 1842, when Dr. Crawford W. Long, of Athens, Georgia, made use of it for allaying pain in surgery and observed that persons who had hurt themselves while under its influence felt no pain. Unfortunately, however, it remained for Dr. Wm. T. G. Morton, on the 30th of September, 1846, in Boston, to perform the first case of an anæsthetic operation under sulphuric ether, by means of which the surgeon's knife was made kind and surgery every afterwards robbed of its terrors. Of all the substances yet discovered for prolonged anæsthesia the safest by far is sulphuric ether.

It affects first the respiratory centre, and before the citadel of the vital fluid is devastated we have a warning of the approach of the death-dealing seer.

In the production of its anæsthetic effects we notice three stages, which are as follows:

1. Exilaration and excitement.
2. Narcosis.
3. Sensibilities and reflexes abolished.

There is noticed from its administration a hacking cough and feeling of strangulation from local irritation. After its absorption successively and progressively are the nervous functions affected. Cerebration and voluntary motion first yield to the subtle invader and subsequently sensibility and consciousness are no longer able to withstand its influence and the patient lies in a state of complete narcosis. Before this stage of complete narcosis there is a period of excitement, and it is at this time that the character of the individual is developed. The banker draws his checks and figures interest, the doctor vends his pills and various individuals reveal their hidden secrets.

Before complete insensibility there is a momentary anæsthesia called primary, and this is sometimes utilized for minor operations, though most authorities contend that operations during the primary anæsthesia shock more violently than where complete narcosis is induced. Ether is irritating to the air-passages and at the outset there should be allowed some admixture of atmospheric air so as not to frighten the patient, though later on it should be pushed to purity to prevent vomiting. Owing to this irritation of the bronchial mucous membrane pulmonary congestion and œdema may supervene, and hence it is best for a time to avoid exposure and to apply as much artificial heat as possible. Ether, too, lowers the temperature, and for this reason, as well, the above cautions should be rigidly adhered to. There are times now when choosing an anæsthetic we would not be led to select ether.

Where there is any renal disease, as evidenced by albumin or casts, ether would be contra-indicated and chloroform, that I aim to discuss later, would be employed. So, also, if there be much bronchial irritation or chronic pulmonary trouble, ether would not be our selection. If, on the contrary, the heart is weak and flabby, ether is indicated and chloroform to be avoided. The advisability of changing from ether to chloroform, or the reverse, during the operation, must be left to the individual judgment of the physician who has charge of its administration.

Chloroform is a later production than its co-partner ether. It was not discovered until 1832, and then almost simultaneously by Soubeiram, in France, Liebig, in Germany, and Samuel Guthrie, of Sackett's Harbor, New York, though it is to the latter that a generous profession has awarded the honor of its discovery. Notwithstanding its discovery in 1831 it was not made use of for anæsthetic purposes until Sir James Y. Simpson brought it to the attention of the profession on the 15th of November, 1847, at Edinburgh. Upon its inhalation, after a brief period of stimulation, it is depressing in its effects and in over-doses is a certain poison, acting by the destruction of the contractility of the heart-muscle.

John MacWilliams, of Aberdeen, has demonstrated that even when due admixture of atmospheric air has been allowed in its administration there is caused at times an acute dilation of the heart, and that this may even precede the loss of conjunctival reflex, affecting both sides of the heart, and often occurs before any fall of blood-pressure. Artificial respiration in these cases avails us nothing, for the dilated and enfeebled heart is no longer able to maintain the circulation. The dilation is produced, according to MacWilliams, by the direct poisonous effect of chloroform upon the heart-muscle. Up to the time of the report of the first Hyderabad Commission a large majority of clinical observers shared in the belief that chloroform destroyed life mainly through cardiac failure. After repeated experimentation upon the lower animals this Commission decided that the drug killed by its destructive action upon the respiration—a statement that provoked most violent oppostion. So violent, indeed, that a second Hyderabad Commission was formed under the auspices of the Nizam's government; this Commission, after a thorough re-investigation, arrived at practically the same conclusion, namely, that chloroform always arrested the respiration before the heart.

Hare and Thornton, under the auspices of this same Nizam's government, made a very elaborate report to the effect that chloroform practically always kills by failure of the respiration when administered by inhalation, "provided" (and this they regarded as the most important), "that the heart of the anæsthetized has not been rendered functionally incompetent by fright or violent struggle, or again by marked asphyxia. While they most positively assert that the drug destroys life by primarily causing failure of the respiration, it is also asserted by them with quite as much positiveness that in excessive doses by inhalation chloroform has a depressant effect on the circulation, which is chiefly due "to centric vaso-motor depression with final depression of the cardiac muscle itself."

In the face of so great mass of contradictory experimental evidence, discordant laboratory results avail us, as general practitioners, nothing, and we should cultivate our own good judgment and study carefully each individual case. Chloroform, let me repeat, is unquestionably more dangerous than its co-partner ether, and yet were we able to find out directly the deaths produced secondarily by ether as from pulmonary congestion, œdema and the like, I feel very confident that we would not find such disparity in the statistics.

It is a fact that most of the recorded deaths from chloroform narcosis come from general practitioners, showing to my mind that it is principally to the inexperienced that this untoward result is apt to happen. Let us, then, study some of the methods to avoid this.

In the first place, its administration should not be left to the careless and inexperienced, but should be administered by the one who has had most experience with it and who will be wholly absorbed in its administration. Secondly, before the beginning of its administration we have certain agents that are useful. Of all the circulatory and respiratory stimulants atropia ranks first. It diminishes the secretions of the mouth, throat and bronchial mucous membranes and likewise the skin, and, according to Hare, allows the administration of more chloroform without depression. It is combined with morphine, so Wood states, as "a useful corrigent to the disturbing and irritating action of the latter upon the pneumogastric." All of these effects are desirable in the preparation of chloroform and ether anæsthesia as well.

In small doses morphine is a cardiac stimulant and aids largely in diminishing and preventing vomiting after ether. A happy combination, therefore, before anæsthesia is $\frac{1}{4}$ gr. morphia and $\frac{1}{60}$ gr. of atropia—they both lessen vomiting. Since both chloroform and ether lower temperature, external heat, such as water-bags, hot irons, etc., should be applied. The temperature of the room and its humidity should be taken into account. When high and dry, volatilization is more rapid and it is more diffusible, and anæsthesia and recovery therefrom more rapid.

Richardson claims that "fatal results follow upon the sudden impact of chloroform (an irritant vapor) upon the nervous periphery of the breathing surfaces." This fact points directly to the danger of rapid chloroformization. Richardson's formula, a most excellent one, is as follows: "Never induce slow narcosis through every stage, but, having carefully felt the way in the first minute or two, push quickly into the third stage, in which, if the body be not surcharged with chloroform, the danger is comparatively small." During the administration of all these subtle vapors we should ever be on our guard. We, as men endowed with reason, must not follow blindly the result of laboratory experiments upon parish dogs when they collide with practical experience or physiological common-sense. The respiration should have all the consideration that is its due, but it would be the folly of follies, to use the words of Mr. Daily, the London anæsthetist, "to neglect the pulse, the pupil and color of the complexion."

The respiratory and cardiac centres are vital centres, and when the chloroform is pushed to the extent of interference with either the pulse or respiration, we are already confronted with one of the signs of dangerous overdosing. Again, both the pulse and the respiration can be affected not alone by the anæsthetic, but by the reflex inhibition, which is oftener the precursor of vomiting, and especially is the pulse irregular and depressed during vomiting. Of all the indications the pupil is the most important. The third nerve centre which governs it is not a vital centre like the respiratory and circulatory, and its narcosis is not in itself followed by dangerous symptoms. In all anæsthesias there are three changes that the pupil undergoes. At first dilated and active, then contracted, and finally dilated and fixed. The dilated and active pupil indicates that narcosis is incomplete, the contracted pupil is an indication of complete and safe narcosis, while the dilated and fixed pupil is the herald that comes to forewarn us that unless we desist and are less persistent the respiratory and cardiac centres are in danger of narcosis. The only safe pupil, then, is the contracted one. The pupillary changes are explained as follows: In the first stage the pupil is dilated because all the impulses received by the half-narcotized cerebrum cause a reflex inhibition of the third nerve centre, and active because the centre itself has not been anæsthetized. In the second stage the pupil is contracted because the cerebrum is completely anæsthetized, and all cerebral reflexes being cut off, the third nerve centre is unimpaired in its action. Further, the pupil is dilated and fixed because the centre itself has been reached and narcotized. This is indication of great danger, for respiratory and cardiac narcosis are imminent.

What I have said in regard to overcoming the dangers of chloroform is equally applicable to ether. Should we, in the production of anæsthesia, be confronted with dangerous toxic symptoms, what are we to do? Always we should have prepared a hypodermic of strychnine and digitalis, and this should be immediately inserted into the deltoid muscle. If there is present much cynosis, a pearl of nitrite of amyl should be broken in a handkerchief and applied to the nostril. The table should be inverted into an inclined plane, with the declination at the head. Posture in these cases, according to Hare, is all-important. I had the pleasure of being present to hear Dr. Hare's lecture at Johns Hopkins, with demonstration on the cadaver, of the method of opening the glottis. The tongue should be pulled outward and upward toward the upper incisors and the neck, instead of being lowered, as in Howard's method, should be elevated, else the tongue will obstruct the glottis, and the head should be extended. The position is best described by that one assumes when running. Sylvester's method was found to be by far the one allowing the greatest entrance of air, though the feet should be fixed and the body stretched. In the beginning the first movement should be an expiratory one, so as to rid the lung of that vapor-laden air that would otherwise continue to be absorbed.

Electricity, that has been so vaunted and highly lauded as an aid in restoration after imminent narcosis, is not so extensively used as formerly. According to Wood, if applied on the left side, there is great danger of electrolyzation of the pneumogastric, and thus inhibition of cardiac motility, and sometimes, when applied on the right side, there is danger of an overflow of current and with some inhibitory action resulting. The pouring of ether over the bared abdomen, intermittent pressure over the diaphraghm and the grasping of the heart through the relaxed chest wall and its intermittent compression are all in use to-day and have their advocates.

Methylene bichloride was first made known to the profession in 1867 by Dr. W. B. Richardson and since pronounced by Mr. Spencer Wells to be the safest anæsthetic. In more than a thousand cases with him it proved free from danger and without unpleasant symptoms. With nine fatal cases, however, recorded against it, it is to-day almost a thing of the past. Several years ago ethyl bromide came into very general use and at one time bade fair to supersede both chloroform and ether. Several lethel exits sufficed to drive it from the anæsthetic stage. Within the past year Dr. W. S. Magill, of Chicago, has again brought it to the attention of the profession and lauds it highly in inducing the first stage of anæsthesia and following it up with chloroform. In all sixteen fatal cases are on record against it. Its advantages, according to Magill, are—the rapidity, the elimination of the disagreeable phases of chloroform or ether which precede or retard recovery from these reagents and the diminished quantity of the toxic agent required—all these elements of superiority combine to invite the notice and experimentation of surgeons.

Of the new anæsthetics, the most recent that has been brought to the attention of the profession is pental, by Dr. P. F. Feoddroff. It is not irritating to the mucous membrane, and its duration is from one to two minutes, though once induced it may be prolonged from two to five minutes. In very many cases the radial pulse is not affected, though especially at the beginning should we be circumspect and cautious in its administration.

Analgesia is induced while consciousness is still retained, though, as with the other anæsthetics, prudence demands that we await complete anæsthesia. In ten or fifteen minutes after its first administration it may be used again with perfect safety.

In short, pental is well adapted to operations of short duration. None of these agents have gained a foothold on the American people.

Early in 1847, when the year was yet young, so enthusiastic was Sir James Y. Simpson, that it was his custom to go about singing:

"Not poppy, nor mandragora
Nor all the drowsy symphs of the world,
Shall ever medicine thee to that sweet sleep."

And so may we, in the closing decade of the nineteenth century, in no short time be able to say:

"Not chloroform, nor ether,
Nor all the subtle vapors of the world,
Shall ever medicine thee to that sweet sleep"—

a sleep to be produced by that ideal anæsthetic yet to be. Before that time, however, let us, one and all, as general practitioners, study most carefully the danger signals in the administration of chloroform and ether, and thus continue in pursuit and in perfecting, to use the words of Dr. Jacob Bigelow, "the most beneficent discovery which has blessed humanity since the primeval days of Paradise."

DISCUSSION.

Dr. Booth emphasized two points that should be attended to in resuscitating a person in chloroform or ether narcosis, namely, getting blood to the brain and artificial respiration. He cited two cases in which respiration and pulse had both ceased. In one, elevation of the feet and artificial respiration had worked excellently; but in the other case they failed; the reflexes were aroused, however, by dilatation of the sphincter ani.

Fibroid Tumors and Pregnancy.—In *Archiv. de Toc. et de Gynec.*, October, 1894, Remy reports a case of a woman with a large fibroid tumor becoming twice pregnant. There were two distinct tumors in the abdomen, one on the right side and one on the left, which at full term were about of equal size. In the first labor the fœtus was dead, but in the second a living child was born and the mother made an uninterrupted recovery.

Hofmeier (*Zeitsch. f. Geb. u. Gyn. bd.* xxx., *heft* 1) says that myofibromas complicating pregnancy do not impose any particular danger on the patient, either from hemorrhage or interruption of gestation; in fact, the dangers of such a pregnancy are no greater than those of a normal one. In some cases there is a rapid hypertrophy of muscle fibre of the uterus, but this rapidly recedes after confinement, and should not constitute a danger to the patient. Another element of importance to be considered is the swelling of the abdomen to immense proportions when the two tumors are present. Hofmeier admits that complications justify operation during pregnancy, but claims that the indications for such operative interference are very rare. The operation should be postponed as long as possible, since the provocation of a premature labor entails the sacrifice of the child and more danger to the mother than confinement at full term.—*Medicine.*

HEMORRHAGIC FEVER—SOME EXPERIENCE WITH IT.

By P. B. Loftin, M.D., Grifton, N. C.

"Boil down," printed on the card notice from oui Secretary, attracted my attention when I received notice of this meeting with a request that I send in the title if I expected to read a paper.

I assure you, Mr. President and gentlemen, it would more than please me could I think a volume, write a page and convey my experience with this dread monster to the minds of this body by publishing of that page but a single line; but such is not the case, and my hopes along this line would be blighted were I to expect it.

From the headlines of this paper you would naturally suppose that the writer had encountered some hemorrhagic fever in his practice, and so he has. It was so prevalent in our town and surrounding country from September 1st, 1894, to the last of February, 1895, that it was really alarming.

Do you ask what hemorrhagic fever is? I cannot define it satisfactorily tô myself. I do not think it an acute affection, though when we diagnose the malady under the above name it usually runs its course in a short while, and your patient is convalescent; or, on wings of a golden hue, his spirit soars to untried regions.

I must think that it should be placed with chronic diseases, because I am satisfied that hemorrhagic fever is developed from chronic malaria, because the history is ever thus: Patient—I have been having chills occasionally for months, about one every week; would take some quinine and stop them; would take a little quinine every day for two or three days, then stop.

So it would go for months; patient become ænemic, with a history of a broken-down constitution. Suddenly, when the patient is least expecting it, when he feels as well, perhaps, as at any time for months, he urinates, and behold, it is the color of cherry wine. When once seen it will never be mistaken if preceded by chills, as above stated.

I am fully satisfied that hemorrhagic fever is caused by an over-production of the malarial germ. How is this germ taken into the system? Answer: With drinking-water. This I have proved, beyond the shadow of a doubt, to my mind. I have, for several years, been pleading with my people to get a better supply of drinking-water, but every family think they have the purest water in the county; though they drink daily from the drainage of a cess-pool, they get used to it, and it tastes all right. I tell you it is a job to make any one think the water he drinks is not all right—about as difficult as it is to make a dude think he could do without his cane and cigarette.

Last fall, when that terrible scourge came on, most of our people began boiling their water, and whenever this is strictly adhered to, the chills always

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*Read before the North Carolina Medical Society, May 15, 1895.

disappear. I cannot dwell along this line, but am glad to see so much is being written and done to get the people to drink pure water. In fact, I sometimes think myself to be fanatical on this subject.

> "Pure water, fresh from the fountain, we think,
> Is nectar such as the gods used for drink;
> And when the people, as beverage, this elixir will use,
> Health to the nation Hygea'll not refuse."

When treat hemorrhagic fever? Before you have it. Prophylaxis. Don't have it; but, if you must encounter it, *then treat it at once.* Ask, as a special favor of your patients, if they intend to send for you in this disease to do it at once, and implore them, if they are going to wait twelve or fifteen hours to send, that they consign their bodies to the dust and their spirits to the God who gave them, without compelling you to add another lost patient to your already too long list—for it surely will be long, if you have many patients who wait for the sick stomach to come on before treatment.

It seems that Providence has provided a few hours, in all cases, to elapse between the first hemorrhage (which is generally through the urinary passage) and the time the sick stomach comes on, in which to treat your patient. My experience has been that, if these golden moments are lost and the patient receives no treatment until sick stomach comes, with the exception of a few cases in children, you had as well inform your patient's family that you can hold out to them no star of hope. It is always best in any case to be careful how you make a prognosis. I would say, in passing, that my experience has proven the disease is not so hard to control in children under twelve years of age.

Treatment.—After your patient has had a hemorrhage and you are sure you have a case of hemorrhagic fever, the first thing give sulph. quinine without much limit, say gr. lxxx., then gr. xx. every half hour until, say cl. or cc. grs. are reached, then gr. x. every hour until sick stomach comes on.

You may say that you cannot get your patient to take it, but when they find they have "yellow chill," as the laity know the disease, and you tell them this is the only remedy, they will swallow capsules like a chicken eating corn.

If your patient becomes blind, slack up on quinine and tell him his sight will return. My experience is that blindness may be expected in some cases, but sight always returns, and it is better to be blind a few days than to have the windows to the soul closed forever.

I give also, in the beginning, a saturated solution of nit. pot., teaspoonful in boiled water every two hours until perspiration sets in, then some four times each day. I stop patient from drinking any water except such as has been boiled. I allow no solid food of any kind given, all spirituous liquors are withheld and no internal stimulant allowed.

I never give calomel until sick stomach comes on, then I give it in $\frac{1}{4}$ gr. doses, combined with pepsin, every half hour, until six or eight powders are given.

I keep bowels open with some agreeable laxative. I do not give ergot to check hemorrhage—it has not, I think, proven best for me. I have patient well nursed and limbs occasionally rubbed during the first thirty-six hours. I give turpentine after hemorrhage stops. If temperature goes above 103°, I bathe my patient in water, say 80° F. I never use any of the coal-tar preparations. My experience with them is that they weaken, and I find cold water not only reduces the fever, but tones up my patients, and they soon learn to love it, though, at first, they may fear it. Then, in short, I treat whatever symptoms I find.

I feel sure that no one can lay down a prescribed course of treatment in every case. It has been my experience, without an exception as yet, that when I have seen my patient within five hours after the hemorrhage, I have not lost a case. On the other hand, when it has been fifteen hours from time of first hemorrhage to time treatment began, I have not saved a case except in a few children under ten years.

So, gentlemen, ever bear in mind,
If success you would find,
Hemorrhagic fever treat in time,
Or soon you'll hear the funeral rhyme."

My excuse for offering this paper is that I have long looked in vain for something satisfactory on this subject. If anything I have said has given any brother practitioner one ray of light (should he have to encounter what I have had to for the past six months), then I feel that I am well paid for the time spent on this paper.

DISCUSSION.

Dr. Frank Duffy felt a great deal of diffidence in saying anything about hemorrhagic malarial fever. He was obliged to Dr. Loftin for discussing the subject, but differed from him in some points in the paper. Dr. Loftin said that in all cases hemorrhagic fever has followed chronic malarial fever. It is true that it is chronic in most cases; but from his experience and from that of his brother, Dr. Charles Duffy, who works with him in the same office, he would say that there are cases that do not come on in that way, but that the first manifestation of which is hemorrhagic malarial fever.

He considered the use of quinine the most important point to be discussed. He and his brother had used quinine, as everybody else, in the beginning of the treatment of that fever, and have about reached the conclusion to use none, and certainly if any, very little. He had known some instances where chills were followed by hemorrhagic fever, treated in methods which he would presently attempt to indicate, and then followed by quinine, and that the hemorrhages followed the use of quinine. Quinine was discontinued and other treatment used and the hemorrhage disappeared, and quinine again administered and the hemorrhage returned—sufficient to make them believe that there was a causative relation between the quinine and the hemorrhage.

He thought it highly important that the patient be treated at once. He had seen one fatal case this season which did not seem to have had any malarial chills preceding it. Another physician had been attending this patient living some eight or ten miles from New Berne. The diagnosis was pneumonia, which he thought correct from some indications. He was called in a few days later and found that hemorrhage had occurred from the kidneys and that the patient was very far gone and he died in a few hours. That was the only fatal case out of a half dozen they had treated during the year. He relies largely upon bicarbonate or citrate of potash. He himself used lemon juice frequently; sometimes with potash, so as to get an effervescing draught delightful to the patient. Except in the beginning of the disease the temperature is, in most cases, not above normal, perhaps sub-normal, and does not remotely suggest the use of an antipyretic.

As to the hemorrhage, it is a current belief, and is probably so in the majority of cases, that the red blood-globule does not appear in the urine. He had seen the red blood-globule by microscopic examination of it, and in some very malignant cases not only does the hemorrhage occur in sufficient quantities from the kidneys to show the red blood-globule, but even from the rectum under the skin, or from other surfaces of the body, showing somewhat the appearance of purpuric hemorrhage. A remedy which he had used with considerable advantage, and which his brother had followed him in the use of, is hydrastis. It is an unpleasant remedy to the taste. He had used the fluid extract containing the two active principles of the drug. There is the colorless hydrastis, which he did not believe equal to the colored. The stomach will not always retain that—very frequently will retain nothing. He had seen nothing to equal the hypodermic injection of morphine to stop nausea but the smallest hypodermic injections of morphine may be tried. He certainly would not give more than a quarter of what he would give in ordinary cases; and usually the patient would retain the hydrastis, potash, lemon juice or combination. His friend, Dr. Attmore, who practices in Pamlico county, had probably had more cases of that kind than any one else, and he used a great deal of spirits of turpentine with very favorable results.

Dr. Booth was very glad that he had never had a case of hemorrhagic fever in his life. It was his good fortune to be about a week in the company of Dr. McIntosh, a very eminent man, who has had a great deal of experience in hemorrhagic fever. He has quit the use of quinine and uses digitalis alone and gives very large doses, thirty grains, three or four or six hours

Dr. N. H. Street, Newbern: My experience with the type of fever called hemorrhagic has been limited to eight or ten cases, and consequently I can only theorize as to its etiology and pathology.

I believe it to be a low form of fever—pernicious malarial, paludal or swamp fever of a more or less congestive variety, whose external manifestations are very similar to yellow fever.

I have met with two varieties which, for lack of a better differentiation, may be termed primary and secondary. The primary cases are those which come on suddenly, without the pre-existence of any other disease. The symptoms usually are as follows: Chill, fever more or less pronounced, constipation, sick stomach, jaundice—the system seeming to be thoroughly saturated with bile, usually within twenty-four hours blood appears, first in the urine, but may occur in any part of the body, from the simplest purpuric spot to the most violent hemorrhage from stomach, nose, bowel and bladder. With these symptoms usually in fatal cases, and these cases are nearly always fatal, there is added the horrors of uræmia, there being in some cases entire suppression of urine, with convulsions and coma. Instead of suppression, however, the kidneys sometimes seem to take on an undue amount of activity; but this is deceptive, for an examination of the liquid secreted will show it to be composed of crenated red blood-corpuscles, serum and other liquid elements of the blood, while the urea, urates and other normal constituents of the urine are sadly deficient, and hence may be explained the symptoms of uræmia in cases in which there *appears* to be sufficient urinary secretions. These cases die with uræmia, but what produces the uræmia is not clear. The strong and robust persons seem to succumb to the disease quicker than more delicate ones. The temperature is variable, usually high in the beginning, but falling by lysis or crisis until it frequently reaches the sub-normal degree of 96°.

The secondary are those cases which follow malarial diseases and which have been so well described by Dr. Loftin. These cases have seemed to me to be simply malarial hæmaturia and generally responded to treatment—few of this class die, whether you give quinine or not.

I wish to call attention to a case which I saw last fall, and which I am certain was a case of hæmorrhagic fever, so-called, without any hemorrhage at all. There were all the symptoms of the fever which I described under the head of primary, the patient dying within three days from uræmia, with suppression of urine. Careful examination failed to show any extravsation of blood, not even a purpuric spot being visible.

If the patient had lived I probably would have thought that it was a case of catarrh of the bile duct, but displaying, as she did, all the typical symptoms of the disease, and with such characteristic fatal termination, I am sure that the case was one of this type.

She was thirty-four years old, the mother of three children and had always enjoyed the best of health. I would like to know if any of the members have met with similar cases; if not, I hope they will keep a look out and closely study the next case of pronounced jaundice they have which exhibits any of the symptoms of the disease.

As to prognosis, my experience is that the severe cases die in spite of treatment, while the milder forms get well, whether treated or not.

As to treatment, I have found no remedy which I could recommend. Turpentine, digitalis, potassium nitrate, citrate and other eliminants and stimulants are the ones principally used. I have had no better success with hydrastis than with any other drug, while quinine I have long ago discarded as being of no benefit; however, I must confess that I have never used such heroic doses as Dr. Loftin prescribes, and possibly that may account for my lack of faith in the old antimalarial standby in this disease.

Dr. Loftin did not wish to differ from Dr. Duffy, but if he were to go to a patient, no matter what kind of a hemorrhage he had, and he was to say that it had not been preceded by any malaria or any chill, he would not diagnose it as hemorrhagic fever. He believed that quinine in the hands of the laity has done more harm than good. The hemorrhage never makes him uneasy. He said let them have it; they generally stop in about twenty-four hours. He used quinine without limit. The first case he had was a little nephew of his. He found him one night in profuse hemorrhages, and in twenty-four hours he gave him two hundred and forty grains of quinine and nitrate of potash. When the boy recovered he said that he had not felt the amount of quinine given him half as much as he did twenty grains when given to him for other troubles. The poison of this trouble seems to consume the quinine, and in consuming the quinine the quinine aborts or stops the poison. He never gives less than thirty grains in a grown person, because he thought it did more harm than good. It seems to poison the red blood-corpuscles and causes people to be anæmic. He believed that the indiscriminate use of quinine had had something to do with hemorrhagic fever, because he thought it weakened the person given as the laity give it.

Dr. Duffy said that it was a rule that hemorrhagic fever is preceded by chronic cases of malaria, but he thought there are exceptions—that he would not exclude that diagnosis simply because there was no marked history of chills.

Dr. C. U. Richmond, of Manchester, suggests bistourage or subcutaneous torsion of the spermatic cord for the purpose of cutting off the blood-supply of the testis, causing its subsequent atrophy. This is done successfully in the lower animals.—*Ex.*

THE ANATOMY OF OBLIQUE INGUINAL HERNIA IN THE MALE WITH REFERENCE TO MACEWEN'S OPERATION.

By Richard H. Whitehead, M.D., Chapel Hill, N. C.

In accepting the kind invitation of the Chairman of this Section to write a paper upon the subject of The Anatomy of Oblique Inguinal Hernia with Reference to Macewen's Operation for radical cure, I expected to have the pleasure of demonstrating some dissections of the parts concerned. I very much regret that I have been disappointed in that hope, and shall have to content myself with a short verbal description.

In order that the testicles shall have the best possible blood supply, their arteries are derived from the abdominal aorta. The course of the spermatic vessels, from their origin to their destination, furnishes one of the most interesting objects of study in the anatomy of that "wonderfully made" creature, man. Passing down from the aorta behind the peritoneum the spermatic vessels come into relation on each side with the external iliac artery, which they cross from without inward, but so obliquely as to lie on the front of that artery throughout most of its extent. They are next confronted by the transversalis fascia, but just above and internal to the point where this artery changes its name to femoral there exists an opening in this fascia, the internal abdominal ring, so-called, and through this ring the spermatic vessels, joined by the vas deferens, pass, these structures being held together by a tubular prolongation of fascia from the margins of the ring, and together constituting the spermatic cord. The next two elements of the abdominal wall, the transversalis and internal oblique muscles, obligingly make way for the cord by arching above it. In this situation the fibres of the two muscles are conjoined and arise together from the outer half of Poupart's ligament, arch upward and inward, forming the "conjoined arch," and then, becoming tendinous, turn downward and inward, to be inserted under the name of the "conjoined tendon" into the crest of the pubes and the adjacent portion of the pectineal line. There now remains between the cord and its destination in the scrotum only the aponeurosis of the external oblique muscle, and here it finds another opening—the external abdominal ring. Note that this opening is not found just in front of the internal ring, but about an inch and a half nearer the median line, with its base at the crest of the pubes, and therefore internal to the spine of that bone. Thus between the two rings the cord lies in a canal which is just above, and parallel with, Poupart's ligament, about an inch and a half long, with the aponeurosis of the external oblique for its external wall, its posterior being furnished externally by the

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*Read before the North Carolina Medical Society, May 15, 1895.

conjoined tendon and internally by the transversalis fascia, which is here quite thin. Crossing the back of the canal between the transversalis fascia and the peritoneum is the epigastric artery, on its way to form the great anastomosis between the subclavian and the external iliac arteries.

Thus the route for the descending testes and their blood-supply is accomplished, but with the result that a weak spot is left in the abdominal wall, through which a discontented gut may escape. To obviate this defect, nature makes the canal oblique, so that any increase of abdominal pressure pushes the posterior wall against the anterior wall of the canal, thus effecting a valve-like mechanism, which, in the majority of mankind, works in as atisfactory manner, very much in the same way that the ureter opens into the bladder.

Now, when rupture occurs, the normal anatomy of the inguinal region is materially changed—first the peritoneum, which normally covers the abdominal face of the internal ring, is pushed on down the canal by the descending bowel or omentum, and thus the hernial sac is formed; next the internal ring is gradually stretched and dilated, and finally dragged downward and inward, until it lies almost behind the external ring, thus destroying the valvular mechanism of the canal.

An operation, then, directed towards a radical cure of hernia, should aim at retrenching the size of the internal ring and at restoring the normal valve-like mechanism of the canal. Macewen claims that his operation fills both of these indications.

The important question of what disposition shall be made of the sac, is solved by him in a very ingenious way. If the sac be left in the canal, he says, it will act as a plug, and plugs dilate instead of obliterating the canal. If the sac be ligated and removed, there will still be left a puckering at the internal ring, which will probably be gradually dilated by the bowel, and thus the hernia be reproduced. Accordingly, having freed the sac, both in the canal and for about half an inch around the circumference of the ring, he introduces into it a purse-string suture, so that the sac will be thrown up into folds when the suture is tightened. The whole sac is then returned through the ring into the abdominal cavity, and the purse-string, having been tightened, is stitched into position against the abdominal surface of the ring, where it forms a convex pad, protects the ring and "sheds the intestinal waves back away from the opening." Then, by double stitches passed through the inner margin of the ring and of the conjoined tendon on the inside, and Poupart's ligament and conjoined arch on the outside, he diminishes the size of the internal ring and pulls it outward, thus restoring the normal valvular function of the canal.

Society Reports.

RICHMOND ACADEMY OF MEDICINE AND SURGERY.

May 14, 1895.

The President, William S. Gordon, M.D., in the Chair.

The President read a report of a case of Puerperal Sepsis, illustrating the advantages of local treatment.

Mrs. ———, a primipara, twenty years of age, was taken in labor on the morning of March 17th. The pains were irregular; but her health had been excellent in every respect, and at the onset of labor no untoward symptoms were present; her temperament, however, was excessively nervous and apprehensive.

The pains were inefficient, almost becoming suspended, and I was not summoned again until 2 a. m., on the 18th, when the symptoms still pointed to a protracted labor. I returned at 8 o'clock, and, for the first time, made a vaginal examination, finding the bag of waters ruptured and the head well down, but engaged in a rigid and incompletely dilated os. Believing that I would have some trouble, I called in Dr. Hugh M. Taylor, and, in the meantime, gave sufficient chloroform to deaden the pains.

By the time Dr. T. arrived the os had relaxed slightly under the anæsthetic, and the head was somewhat advanced; but the progress of the case was very slow, and our decision was to deliver with the forceps. This was done under anæsthesia very skillfully by Dr. T., with only a nick in the commissure, which was slightly enlarged by the passage of the shoulders.

In about ten minutes I expelled the placenta into the vagina by Credé's method, and traction on the cord completed the delivery.

Immediately afterwards there was a profuse hemorrhage, which was attributed to a cervical tear; but in spite of all effort to locate the lesion, we were frustrated on account of the free bleeding and the weakness and shock from which the patient suffered.

The hemorrhage was checked with hot water and ergot; recurred subsequently during an examination of the cervix, and was checked again by hot water. We then decided to do nothing more until the next day, when Dr. Taylor closed a moderate tear in the cervix with two sutures. The os had a boggy, bruised, mottled look, which neither of us liked. The lochia were normal.

When I called on the morning of the 20th, the patient informed me that she had had a chill at 2 a. m. I found considerable tenderness over the womb, tubes and ovaries—the left especially—and the temperature $103\frac{2}{5}^\circ$ Epsom salt was ordered to free purgation, turpentine stupes were applied

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*Read before the Richmond Academy of Medicine and Surgery May 14. 1895.

and carbolated vaginal injections used. In the afternoon the temperature had fallen two degrees.

March 21.—Temperature about the same the whole day.

22.—Temperature 103° in the evening. Dr. Taylor saw her with me. No change made.

23.—Temperature 104$\frac{4}{5}$° in the morning. Stitches removed; womb curetted, flushed out with bichloride solution and Blair's chloral thymol, and packed with iodoform gauze saturated with iodoform and glycerin. In four hours the temperature fell to 103$\frac{3}{5}$. Stimulants and quinine were given.

After this the temperature varied from 104° to normal, which it reached April 2d.

From this time convalescence was well-established, and the patient has made an excellent recovery.

This was a case of puerperal sepsis, manifesting itself in metritis, salpingitis and ovaritis. Although the patient's pulse and facial expression were good throughout the whole course of the disease, there was decided lymphatic involvement and blood contamination, causing several hemorrhages from the nose. Neither Dr. Taylor nor I was guilty of any known sin of omission or commission so far as the cause of infection was concerned.

An interesting question to ask is, whether the os should have been sewed up at once or at all. The shock and exhaustion due to hemorrhage predisposed the patient to infection, and my belief is that the wounded os was the source of the trouble.

The main lesson to be learned from this case is the value of local treatment in puerperal infection. A certain amount of good was done by tonics, stimulants, full feeding and careful attention; but in my opinion the patient's life was saved by the surgical measures which Dr. Taylor wisely suggested, and, for the most part, skilfully executed.

The rapid subsidence of the hardness, tenderness and pain was far from what we expected; and, although we could hardly hope for perfect tubes after such damage, still it is too early to say exactly what benefit may not be derived from tonics and absorbents. The patient has been walking for several weeks, and is improving daily, while, at my last examination, the induration on the left side had decidedly decreased.

There were two other important lessons taught by this case. One was, never to trust vaginal douches to an untried monthly nurse, no matter what her reputation may be; and the other was, never to delay local measures when the temperature, after a reasonable interval, does not decline.

I am no routinist, for each case must be met with its own indications; but I am firmly convinced that the various forms of puerperal fever have largely a local starting point, and that the water must be thrown where the fire originated, and where it continues to burn the brightest.

It would be well if women could behave as animals after labor, walking about and draining thoroughly, instead of lying down with a torn cervix dipping into a pool of pent-up lochia.

DISCUSSION.

Dr. H. H. Levy said that in many instances he had followed the line of treatment laid down by the President, but in many other instances this plan could not be followed, each case requiring a certain course, according to indications. He has seen the sulpho-carbolate of sodium accomplish excellent results in many cases where there were chills, sweating, etc. The Doctor mentioned an interesting instance in point.

Dr. Hugh M. Taylor said it had been his misfortune (he looks upon every such case as a misfortune) to see in consultation three cases of puerperal sepsis. There was no disease he more feared, none he endeavored more to prevent, and none that he thought called for more decided medical treatment. In most of the cases that had come under his observation he could assign the focus of infection to cervical laceration. He thought if some of those who advocated the do-nothing policy would look at some of these infected lacerations, mark how nearly they approach in appearance a foul, swollen, sloughing, infected sore seen elsewhere, they would appreciate the importance of rendering aseptic such a wound. They should remember that a continuous mucous membrane and rich lymphatic circulation present a most favorable condition for extension of the local septic condition and general septic infection. When sepsis originated in, or extended to the uterine cavity, its mucosa became pus-secreting, a condition of septic phlebitis and lymphangitis ensued, foci of septic infection occurred in the uterine walls, and extension to the tubes and their peritoneal investment was not infrequent. The sooner we look upon such a cavity as a pus-secreting and pus-retaining cavity, the quicker will be our appreciation of the importance of directing all our efforts towards removing necrotic tissue by curettement, and debris by irrigation and drainage. Not until the focus of sepsis is destroyed by sterilization can we hope to tide the patient along until the absorbed poison is eliminated.

Dr. J. S. Wellford thinks that the tendency is towards meddlesome midwifery—the use of the forceps, douches, packing, curette, etc., interferes with the processes of nature (which is fully capable of taking care of itself), and the introduction of sepsis is the result. He does not believe there is danger of sepsis from a tear, unless it be a large one. In tamponing the uterus we dam up every means of outlet, thereby bringing about trouble. We try to do too much. Some conservatism is necessary.

Dr. Taylor: The tendency on the part of surgery to invade the domain of midwifery has been often decried. Meddlesome midwifery and masterly inactivity embody principles as potent for harm as good. There is a time to hold hands off, i. e., in the first stage of labor and in all stages where nature is equal to the task of delivery and subsequent restoration to health.

Twenty years ago the clarion voice of the teacher of obstetrics rang out in opposition to meddlesome midwifery and in favor of masterly inactivity. No words in the English language, perhaps, have done as much harm. Under the guidance of such teaching prolonged, exhausting labors, impacted pelves, contused, sloughing soft parts, sepsis and dead children frequently resulted.

Masterly activity, when nature is unequal to the task, is the order of the day, and has almost banished that miserable trouble, vesico-vaginal fistula, and many other post-parturient ills.

MARK W. PEYSER, M.D., Secretary.

SARCOMA OF THE BRAIN SUCCESSFULLY REMOVED BY OPERATION.—(Geo. R. Murray, M.D., M.R.C.P., and W. G. Richardson, F.R.C.S., *Lancet*). The patient was a man of thirty-six years, with no specific or traumatic history, and who had had no severe illness. Without premonitory symptoms, as far as known, he was seized in February, 1894, with a slight attack of Jacksonian epilepsy. He stated that in this attack his left elbow was raised from his side, and that the forearm was pronated and supinated in the flexed position several times in rapid succession. The attack was limited to the left arm, and he was perfectly conscious all the time. This was repeated in nine days, and four days later a third came on. He continued at work for a week, when one day he felt cold and was seized with nausea, which was followed by a severe attack of vomiting. He then lost some power in the left arm, which became ultimately paralyzed. The leg became involved likewise, and attacks of vomiting continued. Pain settled in the right temporal region. There was well-marked, double optic neuritis, rather more advanced in the right eye. The vision was $\frac{6}{12}$; fields normal. The pupil acted, though not very briskly, to light and accommodation. Sensation to touch, pain, heat and cold was unaffected. The muscular sense was lost for the left arm. The knee-jerk was much exaggerated on the left; it was also more active than usual on the right. Ankle clonus could be obtained on the left side, but not on the right. July 1, 1894, the tumor was removed from the upper Rolandic region on the right side. The operation lasted one hour and was not difficult. The tumor was a sarcoma measuring three by two inches. The patient recovered, and eight months later had regained good use of the affected limbs.

NORTH CAROLINA MEDICAL JOURNAL.

ROBERT D. JEWETT, M.D., Editor.

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This Journal is published on the fifth and twentieth of each month, and any subscriber failing to receive his copy promptly, is asked to announce the fact to this office.

Cuts will be provided for any original communications (sent to this Journal only) requiring illustrations, free of cost to the author.

Secretaries of County Medical Societies in the Carolinas are asked to furnish condensed reports of their meetings to the Journal.

All communications, either of a literary or business nature, should be addressed to, and remittances made by P, O. Order, Draft or Registered Letter, payabel to Robert D. Jewett, M.D., P. O. Drawer 810, Wilmington, N. C.

Editorial.

Drinking Water.

It is a strange fact that, while people will spend much time and money providing clean and suitable food, generally but little attention is paid to the water they drink. If the water be clear and cold they are satisfied, little thinking that disease and death may be lurking in each glassful. In no other way, probably, could the medical profession carry out successfully their humane effort to prevent disease than by instructing the people in regard to the necessity for providing wholesome drinking water, and telling them how it may be had. Could the deaths resulting from the ingestion of impure water and water infected by the germs of disease be prevented, there would be nearly 1,000 lives, doubtless, saved to the State each year.

The supply of drinking water in the eastern part of the State is derived generally from shallow wells fitted with wooden curbs. These wells are from ten to twenty feet deep, but during the rainy season become so nearly full that the water may be dipped out. These are the people who wear the sallow complexion and suffer continually from chills and fever. It is among these that thousands of lives could be saved by the substitution of a supply of pure water. And this does not apply to the rural districts only, for often in the towns we find the same thing. How common it is to hear a man boasting of the excellence of the water from his well, simply because it is clear and cold. Another will go on in ignorant bliss because his water had been examined by the chemist and was "the purest water he had ever analyzed." Let the people understand that no chemical analysis ever yet discovered in a specimen of water a single disease germ, and that the only way to be sure of the purity of the water is to make it impossible for germs to get into it or to boil it.

The ideal source of water supply is the artesian well, and this is the only hope upon which the seaboard towns of the State can build in their effort to secure good water. Cities to the north and south of us have resorted to this source and have been well repaid by the improved health of their citizens. The municipal authorities should make appropriations for the purpose of boring deep wells, and when a supply of good water is found in abundance, it should be furnished to consumers at as small a price as possible. If, unfortunately, the city does not own its system of water works, the corporation should be required to purchase the well and supply its water to consumers.

The next desirable source of supply is the cistern. This, again, is expensive and out of reach of the great majority of the people. If properly constructed and cared for, a cistern will furnish a practically perfect drinking water; but there are few owners of cisterns who seem to have any idea of the importance of caring for them; especially do tenants neglect them, though they are the ones to use the water and suffer if it is impure. The cistern is built, the water turned on and never thought of again until a leak or an unusually dry term exhausts the water. No water should be admitted to the cistern except that which falls between October and March, and the cistern should be large enough to contain sufficient water to supply the family through the remaining six months. Then, again, the first water that falls should never be allowed to run into the cistern, for it is filled with the impurities washed from the atmosphere and from the roof, and is probably worse than the water from the ordinary well. The pipe to the cistern should be kept *shut off* at all times except when water is being *intentionally* admitted, which should not be until the roof has been thoroughly washed. Especially in Wilmington, where the buzzards are given full sway, and deposit garbage and the contents of their over-filled maws upon the roofs, should this rule be observed. The best form of filter is made of charcoal placed upon stone chips, and the coal should be renewed and the stone chips washed and sunned at least once in two years. Some persons build their cisterns in two compartments, the dividing wall being of soft brick and serving as a filter, the water being received into only one compartment and passing through the porous brick. These brick soon become very foul and the water, after passing through, is worse than before. They are unsanitary. The cistern itself should be thoroughly scrubbed out every one, two or three years, as less or more care has been taken of it.

Following the cistern, the most desirable water supply is from deep *driven pumps.* These should be driven down sufficiently deep to be beyond the influence of surface water.

In a recent paper on the Relation of Drinking Water to Malaria, Dr. Richard H. Lewis, the Secretary of the State Board of Health, collected a long array of data which showed generally improved health, following the substitution of driven pumps for open wells. The paper should be placed in the hands of every householder in the eastern section of the State, at least.

The experience of many medical men who have made the test is, that a man may live in the most malarious sections and remain free from the disease if he will confine himself strictly to pure, uncontaminated water.

Foreign Correspondence.

LONDON LETTER.

Editor N. C. Med. Journal :

Many of your readers, no doubt, have enjoyed the advantage of study in foreign lands as well as at home, while some, perhaps, are contemplating a trip abroad as one of the pleasures of the future, and to such an account of London, as a medical centre, may not be without interest.

Your correspondent left the States nearly three months ago for the purpose of studying the practice of the special hospitals in England and Germany devoted to the treatment of diseases of the eye, ear, nose and throat, in the hope of thereby enjoying superior advantages, or at least of gaining that profit which must be derived from seeing a variety of techniques in any line of business and from contact with many men and many minds. Having heretofore experienced the excellent facilities of New York and Baltimore, and armed with numerous letters of introduction to prominent professional men here, I must say, in spite of many assurances to the contrary, there was a feeling that, "owl-like, we might be blinking at what's within our ken" in making a transatlantic voyage in search of better ones. It gives me pleasure, therefore, to detail the advantages of London, having spent nearly two months here now, to show that such misgivings were groundless, and to state that the opportunities to be obtained in the world's greatest city are commensurate with her size, especially in the special branches above mentioned.

The Royal London Ophthalmic Hospital, now commonly known as the Moorfields, is the largest eye hospital in the city, having a service of over five hundred out-patients daily. To manage this material intelligently and satisfactorily requires an executive staff of nine surgeons and numerous assistants. The hours during which the practice is carried on are peculiar to London, I believe, namely, from 8 a. m. to 2 p. m.

This has a distinct and unique advantage to those pursuing at the same time the study of diseases of the ear, nose and throat, as the practice of the Golden Square Throat Hospital, the one founded and fostered by the great Sir Morell Mackenzie, begins at 2:30 p. m. and ends at 5 p. m. In this way the visitor is able to see, and, if he is lucky, to assist in the practice of both hospitals every day with perfect convenience.

Any one contemplating a visit to London to spend several months in the study of special or general branches of medicine, should always begin such work either on May the first or October the first. On these dates the general courses of the London Post-Graduate School and special courses at the Moorfields, given by the eminent surgical staff begin, and, as some of the practical classes are limited as to numbers, if he arrive later he may not be able to get admittance to them. Besides, at the Moorfields and at the Golden Square on these dates Junior Clinical Assistants are nominated by their respective councils, and if one is fortunate enough to obtain such a position it will prove to be of inestimable value. The writer was fortunate in being appointed at the Moorfields, and in this way has been working regularly besides taking the courses already mentioned.

A course is given on Clinical Ophthalmoscopy by Messrs. Gunn, Lawford and Silcock, one on Errors of Refraction by Mr. Lang, and one on External Diseases of the Eye by Mr. Morton. These are practical lectures covering the whole field of ophthalmology, with numerous patients to illustrate every form of disease or refractive error, and besides being supplemented by lantern pictures, microscopic slides and micrascopic sections of excised eyes to show the pathological changes peculiar to each. These extend through May and June; the fees are reasonable and the classes so limited as not to interfere with their unique opportunities for personal observation and examination.

There is also a distinct series of lectures given at the Moorfields by distinguished specialists as a part of the London Post-Graduate courses. These extend through May, June and July, and do not conflict with the others above mentioned. All of them have been so far attended by men coming from nearly every section or country of the globe; one of them, who has been studying on the Continent for a year, told me that they were superior to anything he had yet heard, and in the way of illustrating morbid condition and ophthalmoscopic diseases, they were not excelled anywhere.

Four or five lectures are given a week; the didactic part lasts about half an hour and the class then examine the patients in the dark room for about an hour and a half—some are given in the evening, and the aggregate cost is about sixty dollars. At these classes, besides dozens of the more common ophthalmoscopic and external diseases, there have been shown real cases of *moluscum contagiosum*, xerosis conjunctivæ, dermoids of the cornea, affections of the frontal sinus, micro- and bupthalmic eyes, persistent hyaloid artery, capsulo-pupillary membranes, congenital anterior synechia, rupture of the choroid and acute detachment of the retina.

To give an idea of the surgical practice of the hospital, let me enumerate the operations performed in the amphitheatre during the month of May.

There were forty-five cataract extractions, thirty-nine needlings, some for congenital cataract, the majority for opaque capsules, ten iridectomies for glaucoma and twenty for other causes, ten advancements and ten tenotomies for strabismus, nine excisions, eleven lid operations, two sclerotomies, three operations for anterior synechia, three for orbital tumors, two for severe lachrymal obstruction, two for diseases of the frontal sinus and one for neuralgia of the fifth nerve.

The innumerable minor operations are all performed in the out-door department by the assistants. The surgeons give more of their time to the work and do it more deliberately than in the hospitals of our own country. A distinct teaching atmosphere pervades the Royal Ophthalmic and the varieties of technique for advancements, extractions and tenotomies are interesting and instructive.

Ether is given in preference to chloroform almost universally, and always by a patent machine, into which the patient breathes. The senior house gives the anesthetic as being the most experienced. I believe we usually delegate that delicate duty to the least experienced. Mr. Silcock, in the course of conversation, mentioned that he preferred chloroform whenever the weather was warm, because its rapid evaporation prevented its being given in a too concentrated form, but that in cold climates he thought ether the better. This struck me as an original and rational explanation of the respective preferences of our Norhern and Southern States for one of these two anesthetics. In most hot countries chloroform is certainly used.

All of the cotton used at the Moorfields for closing eyes after operations, etc., is dyed blue or red, the former medicated with the bichloride, the latter with the cyanide of mercury, the color simply distinguishing them. I can see no superior advantage to be obtained by these, if asepsis and antisepsis be properly carried out before and after, and the white cotton looks so much cleaner and purer that I should much prefer it as a dressing.

While no parade is made of antiseptic precautions, all the instruments are thoroughly sterilized with boiling water and the conjunctiva and eyelids well irrigated with a bichloride solution before, during, perhaps, and after the operation.

The amphitheatre in which all operations are performed, including cataract, is small, but admirably arranged. Mr. Nettleship operates for cataract without either speculum or fixation forceps, using instead his fingers. All of the surgeons do an iridectomy invariably, with all extractions, and one of them, Mr. Guun, even does a preliminary one some weeks before-hand in all cases.

Mr. Morton, whose ophthalmoscope is universally used here and much appreciated also in the States, is a skillful operator and a most charming gentleman. He is also the author of an excellent book on Errors of Refraction, which is very concise and gives a practical and thorough account of the objective methods of correcting them, namely, by the retinoscope and ophthalmoscope, as well as the subjective by the test lenses. Patients with errors of refraction are largely on the increase and the opportunities for experience in that department of ophthalmology are very great here. As an assistant under Mr. Morton, I have a large number of these to correct by the retinoscope and ophthalmoscope.

Retinoscopy is chiefly relied upon here and is most valuable in detecting simple compound or mixed astigmatism.

The ophthalmometer, the expensive instrument now so much in favor in New York, is not used at all.

Very little attention is paid to the correction of small degrees of heterophoria for the relief of asthenopic symptoms. In fact, the practice of graduated tenotomies and the use of prisms for the correction of muscular insufficiencies, especially exo- and esophoria, is rather laughed at. One lecturer remarked, in reviewing the subject, that the number of tenotomies to effect a cure in America was entirely dependent upon how many the patient could pay for. Asthenopia is thought to be due almost entirely to ametropia and its correction always gives relief. Considerable stress is laid upon, as a means of diagnosis, and much interest taken in the existence of scotoma for certain colors due to impairments of the color sense as being more or less characteristic of certain disease attended with amblyopia. The perimeter is used in the usual way for taking the fields of vision and restriction of the nasal side is always looked upon with suspicion, even if there be no increase of tension. Some diseases common enough with us are conspicuous here by their absence—in all the thousands of cases I have seen there has not been a single one of pterigium and but few of trachoma.

Owing to the difference in the working hours, as before mentioned, every day after leaving the Moorfields and getting lunch, one can go to the Golden Square Throat Hospital. Here about two hundred out-patients present themselves daily, with diseases of the ear, nose and throat. Several separate tables are provided for the assistants and students, where the patients can be examined, diagnosed and treated. During the last months I have seen many rare cases and numbers of those showing all the morbid conditions of these organs.

The fee for the hospital practice for six months is thirty dollars. This is the most widely-known, as well as the largest, special throat hospital in London and is doubly interesting on account of the late Morell Mackenzie's connection with it.

Deafness in children is generally attributed to post-nasal adenoids and they operate on many cases here with ease and rapidity under chloroform, and apparently with great success.

Both of the hospitals in question, of course, treat large numbers of in-patients, and both are taxed to accommodate all the applicants for their gratuitous charity.

One should, of course, always bring his own instruments for diagnosis. Board in London is comparatively cheap and very comfortable, but travelling about the city amounts to a serious item on account of its size. This latter expense can be easily avoided by selecting a location conveniently near the hospitals you decide to attend. As every one knows, it is best to stick to one or two, if any systematic work is to be done, for the loss of time is very great in moving about, and a "rolling stone gathers no moss."

Of the general hospitals here every doctor is familiar with the names of St Thomas', Charing Cross and Guy's, as each has been the source of many of the most beneficent, as well as the greatest, discoveries in medicine. I can only hope to visit these casually, and as I have not yet done so my comments upon them must be reserved for a future letter.

In contrasting transatlantic post-graduate work with the same in the States, I would say that the facilities here are equally as great, and perhaps superior; but when, in addition, the educational advantages of travel are considered, it is certainly a fact that studying abroad is a most profitable, as well as pleasant, way of increasing and broadening one's views of medicine.

Edward F. Parker, M.D.,
of Charleston, S. C.

London, June 15, 1895.

OFFICIAL LIST OF CHANGES IN THE PUBLIC SERVICE.

THE ARMY.

From June 27, 1895, to July 10, 1895:

Gandy, Capt. Chas. M., Assistant Surgeon, is granted leave of absence for two months, to take effect upon his relief from duty at Fort Yellowstone, Wyoming.

Huntington, Lieut. Col. David L., Deputy Surgeon General, is granted leave of absence for one month, to take effect upon his relief from duty in the Department of the Colorado.

Ewing, Capt. Chas. B., Assistant Surgeon, is granted leave of absence or two months.

McCulloch, 1st Lieut. Champe C., Assistant Surgeon, is granted leave of absence for one month, to take effect about 1st July.

Taylor, Major Blair P., Surgeon, is granted leave of absence for one month, to take effect between July 1st and 10th, with permission to apply for an extension of ten days

Reynolds, 1st Lieut. Frederick R., Assistant Surgeon, now at Fort Sam Houston, will proceed to Fort Bliss, Texas, not later than July 1st, and report for temporary duty during the temporary absence on leave of Major Blair P. Taylor, Surgeon.

THE NAVY.

For the week ending July 13, 1895:

Crandall, R. P., P. A. Surgeon, detached from the U. S. R. S. "Vermont" and ordered to the New York Navy Yard.

Pickrell, George McC., ordered to Washington Hospital.

Percy, H. T., P. A. Surgeon, detached from Naval Hospital, Washington, and to the Navy Yard, Washington, D. C.

MARINE HOSPITAL SERVICE.

For the 15 days ending July 15, 1895:

Bailhache, P. H., Surgeon, to assume command of Camp Low Quarantine July 5th, 1895.

Hutton, W. H. H., Surgeon, to report at Bureau for temporary duty July 12th, 1895.

Wheeler, W. H., Surgeon, relieved from command of Camp Low Quarantine July 5th, 1895.

Banks, C. E., P. A. Surgeon, to proceed to Detroit, Michigan, on special temporary duty July 5th, 1895.

Goodwin, H. T., P. A. Surgeon, granted leave of absence for thirty days, July 12, 1895.

Vaughan, G. T., P. A. Surgeon, granted leave of absence for seven days, July 6, 1895.

Stoner, J. B., P. A. Surgeon, to proceed to Detroit, Mich., for temporary duty, July 12, 1895.

Eager, J. M., P. A. Surgeon, to proceed to Southport, N. C., and assume command of Quarantine Station, July 6, 1895.

Stewart, W. J. S., Assistant Surgeon, granted leave of absence for nine days, July 5, 1895.

Wickes, H. W., Assistant Surgeon, granted leave of absence for twenty-three days, July 5, 1895.

Miscellaneous Items.

Under this head space will be given (free of cost) to those paid-up subscribers who desire to change their location, or to dispose of practice or property. One insertion will be allowed, but inquiries must not be ordered addressed to this office.

Any news connected with professional men and matters in North and South Carolina will be appreciated by the Editor.

Rush Medical College has established the degree of M.D.C.—Doctoribus Medicinæ Civitatis—"Doctor of State Medicine."

Dr. Bransford Lewis, of St. Louis, having resigned his position with the Missouri Medical College, has been elected Professor of Genito-Urinary Surgery at the College of Physicians and Surgeons, and Genito-Urinary Surgeon to the Baptist Hospital.

Messrs. P. Blakiston, Son & Co. announce that they have in preparation for early issue an authorized translation by Dr. Albert B. Hale, of Chicago, of a Hand-Book of Diseases of the Eye, by Dr. A. Eugen Fick, of the University of Zurich. This is one of the most complete, thorough and compact of text-books. Among its other merits it contains a number of very handsome colored illustrations, not of rare or unusual cases, but of practical matters that will greatly aid the student and be of much service to the practitioner. The retail price will be from $3.00 to $4.00.

The New Mexico Territorial Board of Health has been organized It consists of seven members, appointed by the Governor, to serve two years. The different schools of medicine are represented as follows: regular four, homeopathic two and eclectic one. They are to constitute a Board of Medical Examiners. Examination is not required of graduates of regular medical colleges. The fine for practising illegally is one hundred dollars for the first offense and two hundred for each subsequent offense. Section 7 gives the following definition of to "practice medicine": "For the purposes of this act, the words 'practice medicine' shall mean to investigate or diagnose, any physical or mental ailment of any person, with a view to affording relief, as commonly done by physicians; to suggest, recommend, prescribe or direct, for the use of any person, any drug, medicine or appliance, apparatus or other agency, whether material or not material, for the cure, relief or palliation of any ailment or disease of the mind or body or for the cure or relief of any wound, fracture or bodily injury or deformity, after having received, or with the intent of receiving therefor, either directly or indirectly, any bonus, gift or compensation: *Provided this act shall not prevent people who are entitled to sell medicines under the laws of this Territory from recommending the same*, but nothing in this act shall be construed to prohibit gratuitous service in cases of emergency or the domestic administration of family remedies, or women from practising midwifery; and this act shall not apply to surgeons in the service of the United States in the discharge of their official duties." The officers of the Board are as follows: President, W. R. Tipton, M.D., Las Vegas; Secretary, Francis H. Atkins, M.D, East Las Vegas; Treasurer, J. H. Sloan, M.D., Santa Fe.

The following is the health report of Wilmington for June, 1895:

Mortuary:

	Whites.	Col.	Total.
Population	9,000	13,000	22,000
Total deaths	16	32	48
Annual death rate represented	21.3	29.5	26.2

The memory of the late Henry D. Polhemus is to be perpetuated by the erection of a dispensary building in connection with the Long Island College Hospital in Brooklyn. It will be the gift of Mr. Polhemus's widow, who has purchased three city lots for the purpose. The building will be five stories high, and will be known as the Polhemus Memorial Dispensary. The estimated cost of the structure, with its furnishings, is $250,000, and in addition to this Mrs. Polhemus will present the dispensary with an endowment fund of $250,000 for its maintenance.—*Boston Med. and Surg. Jour.*

Mr. E. G. Ravenstein, the eminent English geographer and statistician, has made some calculations to find when the earth will be unable to find nourishment for its population and they will be forced to cannibalism or starvation. According to him, when the number exceeds 5,994,000,000, or, in round numbers, 6,000,000,000, this emergency will arise, and Mr. Ravenstein believes the population of the globe will reach this figure in 284 years more. He points out that the average decimal increase is 8 per cent., divided as follows: Europe, 8.7 per cent.; Asia, 6 per cent.; Africa, 10 per cent.; Australia and Oceanica, 30 per cent.; North America, 22 per cent.; South America, 15 per cent.—*Jour. Amer. Med. Ass'n.*

M. Le Gendre, of Paris, in an article on "Dangers of Athletic Sports in Childhood," showed that the period of growth created certain morbid predispositions, as a tendency to excessive arterial tension, manifested by palpitations, epistaxis, pains in the head; in arthritic individuals, susceptibility to chill when the body is in a state of perspiration; in neuro-arthritic persons, a tendency towards atony of the stomach, increased by the abundant ingestion of fluids; in others, of nervous temperament, a predisposition to headaches, tics, chorea and a craving for violent distraction. Under such conditions it is easy to understand how excess in physical exercise may be followed by serious consequences. After violent games of foot-ball, tennis, or the too prolonged use of the bicycle, the fever of over-exertion may supervene, with the complications that accompany it, as prostration, curvatures, pain, osteomyelitis, dyspepsia, with great anorexia, dilatation of the heart, palpitations, syncope, true asystole, and possibly hypertrophy, articular inflammation or typhlitis. The author therefore believed it of great importance for parents to have their children examined before allowing them to give themselves up to any particular sport, and to forbid it if there be any trouble of the circulatory, locomotor, digestive or nervous system; to insist upon progressive and gradual increase of the exercise, whatever it be; and, while encouraging athletics and gymnastics, to forbid any competition in these sports.—*Ex.*

A wise old doctor, for the benefit of his health, travelled around the country in a caravan, in which he lived, stopping for short periods at the larger towns. He had a young lad for an assistant, who was more or less quick and intelligent, but rather inclined to jump at conclusions. The doctor taught him a little medicine whenever he could spare the time, and he learned considerable, but diagnosis was to him still a mystery, especially in some cases, when the wise old doctor had used his eyes to detect the source of the illness.

They were staying for a few days in the town of B——, and the doctor had been in some demand, having at a previous visit secured a reputation by some apparently marvellous cures. His young assistant accompanied him on one occasion, when the doctor had pronounced the patient sick from eating too many oysters. This puzzled the lad, and when they left the house he asked his master how he knew the patient had been eating oysters. "Very simple," his master replied; "I saw a lot of oyster shells in the fire-place and the answers to a few questions were all I needed to make a diagnosis."

"One day, his master being absent when a call came, he determined to answer it and see if he could diagnose the case. He returned shortly after and triumphatly told the doctor that the man was sick from eating too much horse.

"A horse, you stupid fool!" cried the irate doctor. "What do you mean?"

"Why, master, it could not be anything else, because I saw a saddle and stirrups under the bed!"—*Ex.*

Reading Notices.

For a number of years it was our privilege to be able to give almost exclusive attention to the study of physiology. Nothing can be more fascinating either to pupil or teacher. During all this time, and even up to the present day, we had to believe that "The principal object of the saliva is to moisten the food, and thus aid mastication and deglutition." And yet, we had to face the fact that an enormous quantity of saliva was secreted every twenty-four hours. It appeared almost like a waste of the forces of nature. We had to believe that the moment this saliva reached the stomach it became inoperative. But now all this is about to be changed. Although Frierichs came to the conclusion a number of years ago that salivary digestion continued in the stomach, yet his work was practically lost sight of. Now Dr. J. H. Kellogg, of the Battle Creek Sanitarium, has just published the report of some extensive experiments in his Laboratory of Hygiene on starch digestion. Dr. Kellogg examined the contents of the stomach, after a test meal, in 4,875 cases. In 669 of these cases he found the starch had been completely converted into sugar. Only in 1.8 per ct. of the cases did he find there was little or no conversion of the starch. This certainly must be accepted as conclusive, and hereafter we must teach that the digestion of starch takes place in the stomach by the aid of the saliva ferments. Clinically this will be of great value and must result in a number of changes in our ideas of diet.

It is only within a few weeks that a chemist of Brooklyn, New York, Prof. E. H. Bartley, published an article in the "New York Medical Journal" setting forth the dangers of having digested starch in the stomach. Our readers may recall the fact that a number of years ago a committee on American Chemists were asked to report upon the dangers of taking a predigested starch into the stomach. Glucose was becoming such a generally distributed article, and was so largely used in the manufacture of confectionery that this committee was asked to report upon its effects on the system. The report was both exhaustive and conclusive that no deleterious effects would follow its use, even in large quantities. But Prof. Bartley has recently taken exception to this report. This is a very important question, for it is a fact that to-day the best candies in the world contain a large amount of glucose; while the most popular beer on the market has recently been shown to contain a larger proportion of glucose than any other brewed in this country.

It is very interesting to analyze some of the statements of Professor Bartley; for instance, he says that milk sugar and cane sugar are "intended" as foods in preference to grape sugar, because the former require digestion before they can be absorbed. It is safe, then, to reason that the more difficult a food is to prepare for absorption, so much the more was it "intended" as a food: therefore, boiled pork and cabbage were "intended" as foods in preference to the more easily digested eggs and milk! . . . For a long time there has been a growing sentiment in Germany that diabetes has not been properly treated. Hirschfeld believes that diabetic coma is favored by the exclusion of carbohydrates in the diet. Schmitz allows his diabetic patients a small quantity of albumen, while he orders the free use of food containing starch, and fat in large amount. Many American physicians are following this line of treatment with better results than heretofore. We must therefore conclude that the treatment of diabetes is bound to undergo a marked change in the near future.—*National Medical Review.*

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Original Communications.

DEMONSTRATION OF A NEW METHOD OF APPLYING PLASTER OF PARIS IN THE TREATMENT OF FRACTURES.

BY HERBERT A. ROYSTER, A.B., M.D., Resident Physician, Mercy Hospital, Pittsburgh.

In response to an invitation from the Chairman of the Surgical Section, I desire to bring to your attention a recently devised method of applying the plaster of Paris splint in the treatment of fractures. This method was original in its conception and in its practical details with Dr. J. J. Buchanan, of Pittsburgh, Pennsylvania, from whom I first learned it and to whom I am indebted for the privilege of this demonstration. The value of this splint is well-recognized by those who have had occasion to test its efficiency in the large surgical service at Mercy Hospital, where it has been exclusively employed for the past year and a half.

Its mode of application is thus described by Dr. Buchanan: "The material required is the ordinary crinoline bandage, into whose meshes plaster of Paris has been well rubbed. The method of application is extremely simple. . . . The length of the splint desired should be marked on a table. The width, also, should be laid off, taking the full semi-circumference at the widest and narrowest points as a measure. . . . The proper size having been marked off on the table, the plaster bandage, soaked and squeezed, but still dripping, is unrolled and made to traverse the figure laid off, from end to end, covering the entire surface with from four to eight layers of crinoline, according to the strength required. A piece of muslin or Canton flannel is then applied to the upper surface of the plaster and the splint turned over so that the flannel lies next to the table. The edges of the flannel are trimmed, leaving a margin of half or three-quarters of an inch beyond the border of the plaster on every side. This border is then turned down and used as a binding for the splint, which is ready for application to the bare limb, the

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*Read before the North Carolina Medical Society, May 15, 1895.

flannel surface next the skin. The limb is elevated and held in the position which it is desired to retain, the plastic splint moulded accurately to it . . and fixed in place by circular turns of a plain muslin or gauze bandage. The limb is lowered and held in proper position on a pillow for a few minutes till the plaster 'sets.' With good plaster this occurs in fifteen to thirty minutes. This splint can be easily removed by cutting the circular turns of the plain gauze bandage, should the limb swell or shrink. The application of a fresh circular bandage renders the splint as firm as before."

The advantages of this splint over the more common way of applying plaster of Paris are readily perceived and may thus be enumerated:

(1) Its removable character.

(2) Its adjustability.

(3) The cleanliness of application.

(4) Its safeness as regards circular constriction.

(5) The facility and thoroughness with which antiseptic treatment can be carried out with it.

(6) The non-necessity of interposing any protective between skin and splint. (Buchanan.)

My individual experience in the use of this splint includes 37 cases, and my personal observation extends over a still larger number. Simple and compound fractures of the leg constituted by far the largest class in the list; in the latter variety the splint proved to be particularly valuable. The skin-opening, if a compound fracture of the leg, being generally, as is well-known, on the anterior surface, since it is here that the tibia lies subcutaneously, the wound, after having been thoroughly disinfected, may be dressed with perfect antiseptic precautions, the plastic splint applied to the posterior half of the limb, and subsequent change in the dressing be made without disturbing the relation of the fragments in the slightest degree. Its superiority over the fracture-box in this instance consists in its greater cleanliness and closer apposition of the fragments. Indeed, it has been frequently seen that this apposition is too perfect, not giving that limited freedom which sometimes materially aids union. This latter point is still under consideration.

Cocaine in Chloroform Narcosis.—Rosenberg, at a recent meeting of the Berlin Medical Society, advised the anæsthetizing of the mucous membrane of the nose with a spray of cocaine solution before the administration of chloroform. By this means anæsthesia is more readily induced, and reflex action on the heart is prevented. Cocaine is an antidote to chloroform, and, therefore, its absorption would probably lessen the danger of the latter. —*Canadian Practitioner.*

REPORT OF A CASE OF INTESTINAL PERFORATION.

By R. H. Whitehead, M.D., Chapel Hill, N. C.

The case which I am about to report to you is so different from anything that I have ever seen in my practice, that I have thought it not unworthy of being recorded. Moreover, I do not feel certain as to its nature, and shall welcome expressions of your opinion on that subject.

The patient was a young man, about 18 yaars old, who entered the University last September. He gave a history of severe suffering from dyspepsia during the past summer, and had found it necessary to live almost solely on milk and crackers much of that time. He had recently improved, and' being a very ambitious fellow, had insisted upon entering the University. He stated that he had almost constant pain in the abdomen. This pain was often severe and was not limited to any particular part of the abdomen, which was flat and not tender to pressure. He had no diarrhœa, and was positive that he had passed no blood, mucus or pus from the bowels.

There was no objective symptom that I could detect except anæmia, which was striking.

He was so anxious to pursue his studies that I consented to his entering college on the conditions of light study and withdrawal in case he did not improve. He did improve, to some extent, for about a month, when he was suddenly taken sick with what seemed to be an attack of cholera morbus. These symptoms rapidly passed away, and on the following day I permitted him to sit up. A few hours after leaving his bed he was seized with violent pain in the epigastric region, tympanitis rapidly developed to such an extent as to obscure the liver dulness, and the temperature rose to 103° F. He lived five days, and died with all the symptoms of severe septic peritonitis.

I had suspected a perforation of the appendix, or, perhaps, of the duodenum; so that I was much astonished when I opened the abdomen post-mortem to find, not one, but a great many perforations of the small intestine extending from the duodenum to the colon. The appendix was apparently not diseased. The perforations varied in size from that of a pin-head to that of a garden pea. Some were situated on indurated bases, others had ragged, gangrenous margins. In several places the wall of the intestine was much thickened, hard and contracted, as if by cicatricial tissue. The mesenteric glands were somewhat enlarged. There were a few soft recent adhesions. The abdomen contained no pus, but its entire contents presented that livid hue which we see in the worst cases of septic peritonitis. I regret to say that no microscopical or bacteriological examination was made.

This is certainly not the usual history of any of the forms of intestinal perforation with which I am acquainted. The supposition which best explains the case to my mind is this: that the patient had chronic intestinal tuberculosis, as evidenced by the indurated bases of some of the ulcers and the cicatricial remains of others, that from some cause or another an acute inflammation was lighted up, leading to perforation of one or more of the ulcers, thus causing a septic peritonitis, which, in its turn, may have produced the perforations which had thin gangrenous margins.

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*Read before the North Carolina Medical Society, May 15, 1895.

THE CARE OF THE INSANE AND THE TREATMENT AND PROGNOSIS OF INSANITY.

By P. L. Murphy, M.D., Superintendent of the North Carolina Hospital, Morganton, N. C.

The subjects mentioned as the title of this paper can only be briefly dwelt on in the time allowed. They will be dealt with in a general way, and in such a manner, it is hoped, that will be interesting, if not instructive, to the general practitioner. The subjects will be treated separately, as far as possible.

All civilized States or communities make some kind of provision for the care of their insane, usually in hospitals and asylums. These terms mean in America very much the same thing, the tendency being to use hospital in preference, for the reason that insanity is now universally believed to be a disease, and is to be treated by physicians, whether by drugs or other means. The old, and at one time common, idea that an insane asylum was merely a place for the detention of persons who are dangerous or otherwise objectionable, to be at large, is fast giving way to the more modern belief that insanity requires, as other diseases, medical treatment.

The popular opinion that asylums are places of dark cells, of chains, of cruel and inhuman treatment, is slowly but surely giving way to the hospital idea, where the unfortunate inmates have the kindest attention and the best treatment. The former keeper is now an attendant, or, what is better, a nurse. Training schools for nurses are being established in most of the best hospitals; in short, everything is being done that can be to foster the idea that persons inflicted with the disease (insanity) ought to have, and do have, the most careful and skillful medical treatment.

Other modes for caring for the insane are in use, namely, private institutions, in colonies, the Scotch or boarding-out system, alms-houses and jails, or outside of an asylum, technically called "single treatment."

A mere mention of these different modes of caring for the insane, except the last, will be sufficient to answer the purposes of this paper.

Private institutions were established to care for a certain class of patients, principally the wealthy, who wish to have better or more expensive apartments than State institutions furnish, or who, for a variety of reasons, do not desire to mix with the class who are sent to public hospitals. They are almost universally under the care of physicians.

The colony of Gheel, which may be taken as the type of all other colonies, has been known since the 17th century. "The legend of St. Dymphna attracted lunatics to Gheel from time immemorial with a view to cure by

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miraculous agency. The lunatics who arrived in the colony were dependent on the church called in Flemish 'Zie ken kamer' (infirmary) and were present at the religious services which should deliver them from their malady through the intercession of the Virgin Mary. When the patients did not recover their reason after a lapse of nine weeks, they were often left with the inhabitants to wait for the next festival of St. Dymphna."

This custom seems to have been the origin of the system of family treatment which has continued at Gheel for several centuries. This system has undergone modifications since—the colony has been subjected to lunacy laws, principally the establishment of a hospital thirty-five or forty years ago. But long before this the lunatics were regarded as patients.

Persons who become greatly excited, or prove unmanageable in the families, or have grave inter-current maladies, are sent to the hospital.

The "boarding-out," or the Scotch system of caring for the insane was, as its name indicates, first established in Scotland. The Scotchman, with his usual thrift and yet humane spirit, undertook to care for the insane in a cheaper manner than in hospitals, which are so expensive to build. The law requires every lunatic to be sent to the proper asylum, unless his removal has been dispensed with by the General Board of Lunacy, who have charge of all these cases in Scotland. Such cases as, in the opinion of the Lunacy Board, do not require hospital treatment, are boarded out in private families. If any of these should become violent, or need hospital treatment, the Board orders his return to the hospital. The patients are visited four times a year (oftener in case of sickness) by the parochial medical officer and twice a year by an inspector of the poor.

This plan has been adopted by the Massachusetts law in 1885 and partially so by Wisconsin, perhaps at a later date. I know of no other State using this system.

Care for the insane in alms-houses is almost universally condemned, especially in such alms-houses as are common in our States. The system has nothing to recommend it except the lessened cost, which is conclusive evidence of improper care.

Jails are used for the temporary custody of dangerous lunatics awaiting proper commitment to the hospitals, which course, while objectionable, seems to be unavoidable in many instances. It is to our credit in North Carolina that nothing but necessity compels it. In the Western Hospital district I know of but one case confined in jail, and that is a criminal case.

Home care, or the treatment of single patients outside of an institution, is for the general practitioner the only practical point under this head of the subject. What cases should be treated at home, or outside of an asylum, is oftentimes a very perplexing question, and, it may be added, a very important one, for, rightly or wrongly, there is a stigma attached to a person who has been an inmate of an asylum. That this odium is rapidly on the decline is true, but as long as such an opinion does exist, it is clearly our duty as physicians to save our patients from it if possible. It is, of course, proper to consider the damage likely to occur by such a step, and act accordingly. Young men and women often have their lives blighted and their future prospects injured by being sent to an asylum when they might have been restored by "single treatment."

Many young mothers break down in their first confinement and rapidly recover if properly treated. We will surely confer a great blessing on them if they can be relieved outside of an institution.

To properly arrive at the answer to the question, What cases can be treated as "single patients," I will first attempt to show those whom we cannot hope to care for at home—in other words, make our diagnosis by exclusion. It will be found that the number whom we are able to give "single treatment" is exceedingly limited.

In our own State one of the first difficulties that, in the vast majority of cases confronts us, is the want of sufficient money to give our patients such care and treatment as he needs, for we will find that single treatment means travelling, in some cases, with an attendant; and even at home the most assiduous watching by the physician and nurses. Few of our people are able to bear this expense, even if the patient has everything else in his favor for private treatment. It is plain that dangerous homicidal or suicidal persons need sequestration, that noisy and destructive ones—those disposed to burn, to steal or commit depredations of any kind, must be restrained. Acute mania, delirious melancholia and even melancholia of less acute form, does better when sent to an asylum; indeed, a cure is hardly to be expected outside of one. General paralytics, because of their tendency to steal and to squander their means, require sequestration.

Persons who have hallucinations of hearing are always dangerous. "The mystics, besides their practices of fasting, asceticism and self-inflicted violence, even to the extent of more or less serious mutilations, often attempt the lives of others in obedience to the sense of duty that inspires them. Those persons who believe they have received from heaven missions to destroy great or prominent persons, others with the view of pleasing God by sacrificing children in imitation of Abraham, still others who have delusions that they are persecuted, those suffering with subacute mania, with acute and subacute alcoholic insanity, those with delusions of grandeur, paranoiacs (primary delusional insanity), all these should be confined.

There are many patients whom we cannot pronounce dangerous, but who seem unable to exercise self-control enough to recover outside of an asylum. The following case will fully illustrate this class of cases: A short time ago a gentleman visited me with his medical adviser with a view to putting himself in the hospital. He was a shrewd business man, one who had accumulated considerable property by thrift and enterprise. He bad formerly been in an asylum, where he remained a short time.

The only thing wrong with him was his extreme restlessness and a desire to drink and spend money foolishly. It was not very plain the gentleman was insane. We finally agreed that he would put himself under my treatment and remain in Morganton, and that I would furnish him a nurse. The patient, after various efforts to exercise self-control, finally told his physician that it was impossible for him to recover unless put under restraint, as he realized that he was insane and needed hospital treatment. And the patient was right.

There is still another class, it seems to me, that requires sequestration, and that is composed of young women whose minds are weak, either from disease or congenital defect, and who shows no dispostion to injure themselves or others. They are a menace to society by becoming the victims of the brutal lusts of vicious men and breeding illegitimate defectives, to say nothing of the mortification and disgrace to their families and friends.

Dr. E. Regis, in his work, "Practical Manual of Mental Medicine," says: "In every case of acute derangement, especially an attack of mania or melancholia, that is of a curable form, isolation should be practiced as early as possible, because it has been irrefutably demonstrated by experience and proven that insanity has not only ten times less chance of recovery at home than in a special establishment, but also that an attack of insanity not specially treated, but left to itself in an asylum, recovers more quickly than would the same case treated and watched outside of an institution."

After thinking over the matter and reading on this special subject, I find only a very few acute cases that can properly or safely receive "single treatment."

Acute primary dementia is a form of insanity which resembles nearly the popular idea of idiocy, and is not preceded by either mania or melancholia, the latter being called secondary or terminal dementia. Acute primary dementia in the young may be successfully and safely left at home, as nothing is required except the mere attending to the bodily functions. As already indicated, some forms of puerperal mania may be treated at home, and so mania transitoria and delirium tremens and a form of mania following epilepsy.

In addition to forms of insanity mentioned which are acute, there are some chronic cases who may remain at home. All of you know many such who are simply called eccentric or peculiar. They often do not require any medical attention. The family or friends being acquainted with their peculiarities, soon learn to manage them. After all, it is simply impossible to indicate further what forms may be treated without isolation. It must be left to the individual judgment of the physician in each case. In acute cases, where there is no apparent danger in trying one at home for a while, a sufficient trial may be given before deciding to send to a hospital.

Treatment.—"In no other disease," says Maudsley, "are the difficulties of treatment so great as they are in mental disease, the intrinsic difficulties appertaining to the nature of obscure disease are increased and multiplied by the social prejudices concerning it; by the frequent concealments and misrepresentations on the part of friends who often may be reckoned on to mislead, rather than enlighten, the physician; by the necessity of removing the patient—probably against his will—from the care of his relations to other care more suited to his malady; by the unsatisfactory character and position of the institutions for the reception of insane persons; and, in some measure, also, by the necessary stringency of lunacy legislation. In the face of such difficulties one may sympathize with Casaubon when he says: "Let others admire witches and magicians as much as they will, who, by their art, can bring their lost precious things and jewels; I honor and admire a good physician much more who can, as God's instrument, by his knowledge of nature, bring a man to his right wits again when he has lost them."

The treatment of insanity naturally divides itself into general, which includes moral, hygienic, medicinal, etc., though in practice they are intimately connected.

Rest in bed as treatment has not until of recent years been so universally used. Of course, in cases weakened by disease, it was a necessity. I refer only to those cases physically able to be up. This treatment, as is sometimes the case, was first brought forcibly to my attention by what seemed to have been an accident. Just ten years ago a lady was committed to the State Hospital suffering with sub-acute mania, with an element of religious and sexual excitement mixed with the usual symptoms of the disease. She was restless and nervous, much broken in health and with poor appetite. She, in the course of time, began to expose her person when a man was in her presence. One day when she was making an exhibition of herself in this manner the nurse was instructed to put the patient in her room, meaning only until I had left the ward. I was called off that day and was gone for several weeks. The patient, in the meantime, having been kept in bed, I was surprised to find her on my return very much improved, better, in fact, than it was thought she would ever be. Since then I have found it useful in other forms, principally melancholia. This treatment has been long in vogue among neurologists, and I believe largely practiced in homeopathic hospitals, It is nearly always worthy of trial in these forms of insanity.

Occupation, Exercise and Amusement.—The first aphorism dinned into my ears as a rather lazy boy was, "An idle brain is the devil's work-shop." This is preëminenly true with the insane. No effort ought to be spared to encourage them to work, and, far better, to have some useful employment, if not useful, then employment of some kind. I have known patients to be improved by giving them rags to tear, indeed, almost anything on which to expend their surplus energies except destructiveness. For the men there is nothing better than the ordinary labor on a farm. They may be usefully employed in the shops, at the barn, and, in fact, at any work they may fancy. I have established a special shop for them, where brooms, baskets, mattresses, etc., can be made. For the women, the usual household work, sewing, knitting, spinning, together with work in the laundry and kitchen, is used. I believe that perhaps their work might be enlarged by employment in the garden, the poultry yard and such other out-door work as they are accustomed to do at home.

Patients are induced to work by granting them certain privileges and appealing to their reason, but principally with us it is done by giving those who work tobacco. Failing to get patients to occupy themselves, they should take out-door exercise—at all events, to be in the open air. There are a class of persons, such as professional men unaccustomed to manual labor, who will not work; for them we try to find pleasant amusements, billiards, ten-pins and amateur theatricals. Dancing with us is more universally enjoyed than any other amusement. The object in all this is to get the patient's attention away from his morbid fancies and to divert his mind into healthy channels. Various other methods are used, but the object and results are the same, whether it by schools, by lectures, by stereopticon exhibitions, by corn-shuckings or what-not.

Seclusion and Mechanical Restraint.—It is sometimes necessary to seclude a refractory patient. All agree to this. Mechanical restraint is sometimes used to prevent injury to others, but of late years it is not used in many institutions except for surgical purposes and to prevent self-mutilation or suicide. The form of mechanical restraint usually employed is the camisole or strait-jacket. Tuke, in his Dictionary of Psychological Medicine, lays stress on what he calls "Appeals to reason." "It has been laid down," says he, "over and over again, that it is no use to argue an insane man out of his delusions." "As a general rule," he goes on to say, "this is no doubt true, but it may be too broadly stated and too invariably acted on." He holds, and he is right, that, while this rule may be applicable at one stage and be no longer useful at another, it is well not to agree with one in his delusion, and yet not too strenuously to deny it. It is a matter of judgment when it is wise to show the patient that he is laboring under a delusion. I believe it is a good rule never to directly admit to the patient that his delusions are true.

The hygienic treatment of insanity includes the usual sanitary regulations in regard to clothing, habitation, food, sleep, etc. There is nothing special in this. The patients should have a sufficient quantity of good, plain, well-prepared food, his clothing should be ample and free, his quarters well ventilated and clean. Untidy patients should be bathed in warm water as often as they become soiled. The best bed for them is a cotton pad, under which should be a rubber or oiled sheet to protect the mattress. In a certain class of lunatics there is great danger of bed-sores. It is not always possible to prevent them, but care should be taken to bathe the parts likely to break down with alcohol or alum-water. Equal parts of castor-oil and balsam of copaiba is one of the best remedies with which to treat the sore.

Hypnotism has been tried in the treatment of insanity, but so far with negative results. Suggestions during the waking state I have occasionally found useful. For a long time I used it only to prevent one patient making an assault on another; but of late I have used it to prevent other insane acts with some good results.

Medicinal Treatment.—"The special medicinal treatment of mental disease," says Maudsley, "lies within small compass. No physic in the world can touch an insane vanity or suspicion, or pluck from the memory a rooted sorrow, or raze out the written troubles of the brain. If that is to be done, it must be done by the gradual operation of sound moral hygiene and the healing effect of time."

It is plain to every physician that when the system is broken down it should be built up, whatever the disease. In the drug treatment of insanity a large part of it is tonic, and for this I know nothing better than nux vomica and iron. Alcoholic stimulants should be used in the exhaustion of acute, or even chronic, mania and melancholia, and, as in general practice, in the old and feeble. Opium should be prescribed with great caution. It is of advantage in melancholia of the climacteric and sometimes in puerperal mania. Morphine combined with Indian hemp is a valuable hypnotic when other means have failed. Paraldehyde is one of the best hypnotics in the sleeplessness of acute mental disease, and, moreover, it is comparatively a safe remedy. Indian hemp is useful in many cases combined with chloral and bromide of potash. The bromides are beneficial at times with patients who can partially control themselves or are on the eve of an attack. Chloral I consider a rather dangerous agent in the treatment of insanity, and it is dangerous to life and more dangerous to reason. I am yet to see a lunatic recover while taking chloral, even in moderate doses. It has well been called "crystallized hell."

Dr. Babcock, Superintendent of the South Carolina Asylum, told me that the first year or two he served as assistant physician at the McLean Asylum, near Boston, chloral was largely used in that Institution, and it was a notoriously noisy place. Afterwards its use was discontinued, with an almost immediate cessation of noise and other disturbances.

Some months ago I was visiting an asylum, when a gentleman living near the Institution called to see the Superintendent on business. In the course of the conversation he said: "Doctor, what have you done to quiet your patients? I have heard no noise for several months, and before that time I heard noises night and day."

The Doctor did not give him any definite reply, but my curiosity was excited, and I began to interrogate. I found that, whereas chloral had been largely used for the length of time the visitor had noticed the cessation of noise, the use of the drug had been discontinued.

Hyoscyamus is useful very often in quieting restless patients, and used for this purpose, it is valuable. The active principle, hyoscine, is one of the best hypnotics. In sleeplessness of old and feeble persons, or, indeed, in any feeble patient, nothing is better than a glass of hot milk, or milk and mush at bed time.

In masturbation, belladonna and cod-liver oil are sometimes effective. Cathartics are especially useful in melancholia, where there is apt to be constipation, and also in chronic mania. I have seen a threatened attack of mania cut short by a brisk saline cathartic. I have had only a limited experience with electricity in the treatment of insanity. Those who have tried it do not speak highly of it, though I have no doubt it may be useful in some cases.

Blood-letting has fallen into disuse; it may be that it is too little used, and the same may be said of revulsion. A seton in the back of the neck is the best form of revulsion.

Massage and the Swedish movement cure are useful in certain forms of dementia or melancholia, where we find it impossible to make the patient take exercise. A mattock, or pick, or a wheel-barrow are better than the most accomplished masseur or the most expensive Swedish movement cure apparatus.

It has long been known that a sharp attack of some inter-current bodily disease has sometimes a markedly beneficial effect in chronic cases of insanity. Some recent writer has suggested the possible advantage of the subcutaneous injection of some toxine in the treatment of old cases. The psychiatrist, you will observe, does not wish to be left behind in the mad rush for toxine cures.

Esquirol calls the insane asylum the great therapeutic agent in insanity. "The treatmemt of insanity," says a recent writer, "cannot stop with the discovery of the physical lesion, which is the disease, in fact, and the proper application of remedial agents to it, but must have in mind, and must attempt to correct, the disorder in conduct that is a large part of its symptomatology. In by far the larger number of cases this conduct disturbance leads to injury, in greater or less degree, of the patient, and necessitates, for this reason, the intervention of other control than the volition of the individual affected. Experience has demonstrated that in private families this control can seldom be advantageously provided. We need not stop here to discuss the reasons for this. Whatever theories may be advanced, practice will determine that individual private treatment for the general classes of the insane, acute or chronic, is neither practicable nor advantageous. The feature of the disease that makes this true is the lesion of judgment and the defect in reasoning power, which prevents the individual from being able to judge correctly as to his own best interests. The restraint of conduct is, therefore, in most instances, a forcible one, and in antagonism to the wishes of the patient. Its enforcement must, more or less, irritate him and put him in antagonism to the agency enforcing the control. Where this is individual entirely, as it must be in a private home, it is more decidedly irritating than in an institution where architectural and institution arrangement largely supplant the individual control of the home. Complete change in environment such as institutional treatment affords, is often a wonderful regulator of conduct. The surprise or shock from the great contrast with home life takes the mental activity, the main-spring of action, out of the morbid channel in which it has run at home, starts up new lines and fills up the old ruts."

The best work the hospitals for the insane do is not the number of patients sent away cured. When the curative stage is passed, our best skill is called into requisition. We must then begin the hardest of all our work to call up in our patient the remnant of self-control that may be left, and to make them as happy and useful as is possible. The best hospitals are those which have the most quiet and orderly patients—which means the happiest and most useful.

Prognosis.—"The prognosis as regards life depends more upon the existence of other bodily diseases than on the condition of the brain affection. Certain forms of insanity are characterized by immediate inflammation of the cortex. Of these the most dangerous is dementia paralytica (general paresis), which proves fatal in one to three years. An unfavorable prognosis attaches to the conditions of excitement which are due to severe congestion of the brain. Persistent motor restlessness and insomnia increase the danger of sudden collapse, and rapid œdema of the brain may develop under such circumstances. The more violent the cause and the more recent the disease, the greater is the danger to life; as a matter of course old and feeble persons succumb most readily." (Kirchhoff.) "Prognosis as regards recovery from insanity requires much greater psychiatric knowledge."

In considering the latter prognosis, i. e., prognosis as to recovery from insanity, the curability of insanity will be included, in a general way, later on.

Acute mania and melancholia are favorable in persons under forty years of age without a strong heredity. Persons with fixed delusions, or hallucinations of hearing or smell, or with periodical attacks with long, free intervals, are unfavorable to complete recovery. A case slow in developing the disease is unfavorable, so are quick or sudden apparent recoveries. Improvement in physical health coincident with mental improvement is favorable, while, on the other hand, improvement in bodily condition without any corresponding mental change is one of the worst indications. Post-febrile insanity, unless due to anæmia, is unfavorable, so also syphilitic and epileptic insanity. Insensibility to pain, to heat or cold, staring into the bright sunlight, absence of the feeling of satiety, the ingestion of nauseous articles, especially of excrement, are found almost invariably to mark unfavorable cases. When the individual begins to admit that he "has been wrong," as he usually expresses it, a recovery may confidently be expected; the same may be said of those in whom there is a return of the natural affections and tastes. This covers nearly all "the rule of thumb" prognoses common in asylums and will suffice for this paper.

Dr. John Thurman traced the history of 244 cases treated at the York Retreat, England, and, in generalizing from these data formulated the following rule: "In round numbers, of ten persons attacked by insanity, five recover and five die, sooner or later, during the attack. Of the five who recover, not more than two remain well during the rest of their lives; the other three sustain subsequent attacks, during which at least two of them die." The York Retreat was founded early in the eighteenth century by the Society of Friends. Being patronized almost exclusively by this sect, the subsequent history of each case was known. This rule has become classic. The recent results of treatment in the York Institution show that the rule formulated a century ago is practically unchanged now.

The curability of insanity, as shown by hospital reports, will now be considered.

The late Dr. Pliny Earle read a paper before the American Medical Psychological Association, in 1885, on the curability of insanity, which seemed to show that fewer cases recover now than did forty or fifty years ago, and to prove this, took the statistics from twenty American asylums during three periods of five years each. During the first quinquenniad there was 46.08 p. c., during the second the recoveries were 34.26 p. c., and during the third the recoveries were 29.91 p. c. I took the results of the same institutions for a fourth period from 1885 to 1890, which shows the recoveries for this period to have been 27.48 p. c.

These statistics show a steady decline from the first to the second period of 11.82 p. c., from the second to the third of 4.35 p. c., from the third to the fourth of 2.43 p. c. While the decline in recoveries is steady, the decline grows less and less. We will hope that it has at last struck rock-bottom, and that hereafter the recoveries in asylums will not fall below 27 p. c. And the next statistics I will present to you seem to show this.

Dr. Earle took the results of 58 institutions for 1884; these show 27.88 p. c. of recoveries. The same institutions for 1894 show 27.51 p. c. It is proper to state that the percentage of recoveries is taken, not on the whole number treated, but on admission, which is the only way to arrive at the correct results.

The 58 hospitals represent the whole United States. The result by sections, as shown by the Doctor, was as follows: In the New England States the proportion of recoveries was 24.92 p. c., the Middle States 21.42 p. c., the Southern States 34.27 p. c. and the Western States 29.81 p. c. The largest number of recoveries was in the Southern States and the smallest number in the Middle States. For the year 1894 the result by sections shows 19.78 p. c. of recoveries in the Eastern States, 26.89 p. c. in the Middle States, 36.08 p. c. in the Southern States, and 26.06 in the Western States—the Southern States still showing the largest number of recoveries, and in this instance the Eastern States the smallest.

When I come to analyze these statistics, I am at a loss how to proceed. It is claimed by many, and I see no reason to doubt their statements, that now psychiatrists are more particular than formerly, and many patients, who, forty years ago, were discharged as recovered, are now discharged as improved, or kept in the hospitals as chronic and incurable cases. And yet this accounts for only part of the facts. The old men claim there has been a change in the type of the disease, that there is more melancholy, more general paresis and other forms of incurable insanity caused by fast living, and the sharp contests for existence. Whatever may be the reason, you have the results before you, as shown by the hospital statistics.

Death-rate.—Unfortunately, I can give you the death-rate for one year only, and that is in the 58 asylums whose percentage of recoveries I have just stated. The average death-rate on the whole number treated in these institutions for the last year was 7.2 p. c. Taken by sections, as we did the percentage of recoveries, it was 8.1 p. c. in the Eastern States, 6.7 p. c. in the Middle States, 7.4 p. c. in the Southern States and 6.8 p. c. in the Western States. The smallest death-rate was in the Middle States and the largest in the Eastern States.

I am well aware that it is not fair to limit our inquiries to one year, that there are many influences, both favorable and unfavorable, which may, and do, modify the results if only one year is taken, but these influences are probably balanced by taking a large number of institutions. We may therefore consider that the average annual recoveries of the insane in American institutions is 27 p. c., and that the death-rate is 7.2 p. c.

It may not be uninteresting to you to know the results of treatment in the State Hospital at Morganton for the twelve years of its existence. At the end of the last fiscal year, November 30, 1894, 1,642 cases of insanity had been admitted; of this number, 642, or 39.1 p. c., had been discharged as recovered, and 213 died, or an average annual death-rate of 4.6 p. c. When writing this paper I did not have the data to prepare the statistics of our two other State institutions, nor the time to procure them.

In conclusion, let me thank you for the courtesy of your attention to a paper treating in so cursory a manner such a broad subject. My object has been to direct your attention again to the whole subject, that the special aspects may be before you for further study, should it suit you.

Apart from its interest to you as physicians, it is of vast importance to each one as a citizen of the State. The State expends each year a third of its yearly general revenue for the support of its institutions for this class, and it is impossible to estimate how much is spent by individuals and families in a way not to be collated in statistical estimates; and finally, in the broad field of philanthropy into which the profession of medicine puts each one of us, it is our duty to study out the wisest course for the care of this class of dependents.

If this effort of mine shall lead any to a clearer understanding of a single feature of the subject, or ameliorate the condition of one defective, I shall be repaid for my labor, and will plead this as an excuse for so long trespassing on your valuable time.

DISCUSSION.

Dr. Charles Duffy thanked Dr. Murphy for his paper, and, as a member of the State Board of Charities, he could see a very decided need that the paper was intended to cover. He said that there are about 2,000 or 2,200 insane people in the State and that the institutions now could not care for more than 1,200, and that the others were without care except such as they received from the various counties in such places as jails and county homes. And the suggestion of Dr. Murphy (the farming plan, or boarding plan), if carried out, might go a long way in improving this population. But it seemed to him that it could hardly be carried out unless a house could be arranged in the neighborhood of the hospitals now in operation. It would be almost useless for each county to try it. A practitioner at first can hardly tell whether the case will be incurable or not. But he may find that the case cannot be cured by that treatment, and then the first thing to do is to change the locality, the surroundings and air immediately. Now, if boarding places were established near these various hospitals, so that the hospital officers would have oversight and superintendence of the cases, many of these would be cared for—living there for a month or two. According to this plan we should hope that from $5.00 to $8.00 a month would be sufficient. As it is, the care in these hospitals amounts to about $12 or $15 a month.

Apart from the matter of cost, it is a great measure. Few people know about this; there are hundreds of these people all over the State in jails and felon's cells They are dangerous and have to be confined and there is no other way. He said that in this day of civilization it ought to be improved, and he would be much gratified if the improvement should start with the reading of this paper.

Dr. Long thought that so much information was not needed, but that action was wanted. As long as there are many men of many minds they would look at it from so many standpoints. There is a constant drain upon the purse of North Carolina to sustain these hospitals, a third of the revenue of the Commonwealth being used in this direction, and still sometimes we are in danger of not sustaining those already admitted. It seemed to him that if they could be colonized around these institutions and classified and be under the officers of these institutions, it would be much better than the present condition. He said that the Society had it in its power to control the public sentiment and could lift questions of this kind above partizan politics, if it would only take the initiative. He wished to add his moral influence, so far as it goes, to the suggestions made by Dr. Murphy.

Dr. Lewis said that the mention of chloral had brought to his memory a case that occurred in a hospital of the influence of chloral. He had remarked at the time that any one who took chloral for any length of time would wind up in an insane asylum, and what Dr. Murphy stated, that improvement was instantaneous as soon as the drug was discontinued in the Institution, verifies his belief. Inasmuch as all so frequently use chloral in their practice, they should bear in mind that chloral is a dangerous thing to use. He supposed that all must feel it a crying shame that so many of the insane were not treated. It seemed to him that the colonization scheme was the best plan, because it would be necessary for these people to have, not only expert care in regard to medical attention, but also in regard to nursing, and that therefore it was important for these institutions to open their doors for the purpose of training, what might be called, subsidiary attendants. If any county should be sufficiently enterprising to send a person for the purpose to one of the institutions to be taught to take care of its own insane, it would be well. He hoped that some movement would be made towards making advances in that line.

HAIRY CONCRETION IN THE STOMACH.—Blaxland (*Intercolonial Quarterly Journal of Medicine and Surgery*) says: I removed from the stomach, in a girl, aged nineteen, a hairy concretion, kidney-shaped, its dimensions being approximately five and one-fourth inches by two inches, its weight being within a few grains of five ounces avoirdupois. The patient had been in the habit, for six years, of biting off and swallowing hair. During recovery from operation the only untoward symptom was an elevation of temperature to 104° F. The patient, while asleep, made several attempts to draw her hair to her mouth.

REPORT OF RECOVERY OF A CASE OF PROGRESSIVE SPASTIC ATAXIA ASSOCIATED WITH MULTIPLE NEURITIS.

By J. Allison Hodges, M.D., Professor of Anatomy and Clinical Professor
of Nervous and Mental Diseases, University College of Medicine,
and Member of Surgical Staff of Virginia Hospital,
Richmond, Virginia.

Clinical cases of the combined scleroses are always interesting, for, presenting a picture of commingled symptoms, as they always do, renders their study very attractive.

This case is reported more especially because of its favorable termination and on account of the treatment employed, than from any peculiarities of symptoms that it exhibited.

The prognosis in such cases is always grave, most of them continuing for many years and some terminating fatally in a very short time. From its multiplicity of symptoms it is also a difficult disease to diagnose, and we confidently hope that, in the near future, scientific investigation will separate the varied and multitudinous symptoms of this malady into several different diseases, and that the diagnosis as well as the prognosis may be influenced thereby.

I have purposely reported this case as one of ataxia paraplegia associated with multiple neuritis, because, while the symptoms of a disseminated neuritis may be present in many cases of the combined scleroses, still it is not usual to find these symptoms so markedly prominent as they were in this case. It is also true that one of the most frequent causes of this disease, as is the case in multiple neuritis, is syphilis, but, in this case, since the cure was effected without recourse to specific treatment, it is believed that this was not a factor in its causation.

It is yet unknown by neurologists whether this disease is a primary or secondary one. In my judgment, this particular case illustrates the most generally accepted theory that it is a secondary affection, for from an elicitation of its history there was evidently in the beginning a primary myelitis.

History of the Case.—Miss Jessie D., age 16, was in robust health up to November 1893, when she received a severe fall at a skating rink, receiving the force of the blow at the lowermost part of the spinal column. She soon recovered from this accident, to all appearances, feeling at times only a slight pain along the lower dorsal part of the spine. In about six weeks or two months there was noticeable some impairment of sensation, slight rectal and vesical symptoms and a muscular weakness in the lower extremities. There was also present a more or less constant cephalalgia, being more intense at the menstrual periods.

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*Read before the Richmond Academy of Medicine and Surgery July 9. 1895.

This condition continued for about three months subsequent to the fall, at which time she was compelled to resort to an invalid's chair, though she did have subsequently one interval of about three weeks' improvement. For the last year, however, she has been incapacitated from taking exercise on account of muscular weakness in her legs. During this period, also, she has exhibited symptoms of multiple neuritis, suffering much from tenderness of the muscles and nerves in both arms and legs and some œdema of the feet, with temporary inflammation of the joints.

She was treated during this time for various diseases, such as neuralgia, rheumatism, hysteria, etc., but without avail, the tendency of the disease appearing to be progressive.

Symptoms upon entering the Hospital were: On March 7th, 1895, she was referred to me and entered the Virginia Hospital. Her appearance at this time indicated a fair state of health; she was in cheerful spirits and possessed a good appetite. Her family history was good, her mother being alive, but her father having died some years previously from pneumonia.

Upon examination, no vertebral lesion was discoverable, and while it was perfectly evident that she was suffering from multiple neuritis, still there were no deformities present. She could stand a few seconds, but the motor weakness in her legs was very manifest, the paralysis being a flaccid one without much muscular atrophy. There was some tenderness on pressure along the spinal column, and she complained of a dull sacral pain and of much inconvenience, both from her bladder and rectum, but more especially the latter. She had good use of her upper extremities, except when suffering acutely from the co-existing neuritis. She could not sit up alone steadily, and if her eyes were closed, she at once began to sway, neither could she touch a given spot on her face with her index-finger, with closed eyes, without considerable difficulty.

The tendon reflex of the knee was very much exaggerated and the ankle clonus was readily obtainable. There was also some diminution of pupillary reflex to light.

The tendency in this case was apparently progressive, for, during the seventeen months in which this patient had suffered, there had been a very gradual increase in the severity of her symptoms.

Treatment.—Being convinced that the existing symptoms were induced by the fall and a consequent over-strain and resulting myelitis, I determined to direct the treatment to that end.

Consequently, the patient was ordered absolute rest and forced feeding as initiatory to subsequent methods of treatment. No medicines of any kind were ever given during the process of treatment, except occasional temporary expedients. The neuritis was treated by swathing the arms and legs in cotton batting enforced with a roller bandage. Later, gentle massage, hot baths and the use of the faradic current of high tension were employed. After three weeks of this treatment symptoms of improvement as regards the neuritis were discernible, but there was little improvement noticeable in the other symptoms.

Spinal galvanization was then instituted, together with Swedish movements, and was continued till the end of the treatment. A weak labile current of from 10 to 15 milliamperes was used every alternate day, lasting from 8 to 15 minutes, the weaker the current and the longer the seance, the more rapid seemed the improvement. At the end of the second month of treatment there was perceptible improvement, and during the two succeeding weeks the patient was able to stand erect for a few minutes. From this time on she made a rapid recovery, and on June 7th, just three months after being admitted, she was discharged from the Hospital, being at that time able to walk several blocks. Since then she has continued to improve, and, while she still shows some evidences of Romberg's symptom, yet she does not fall, even if she attempts to walk with her eyes closed.

Being now deprived of local treatment because of her departure from the city, a prescription of medium doses of potassium iodide and arsenic have been ordered, and she gives fair promise of an ultimate radical recovery.

Selected Papers.

REMARKS UPON TREPHINING THE CRANIUM.

By John Ashhurst Jr., M.D., Philadelphia, Pa.

I find that I have performed the operation of trephining the skull forty-one times, not including those cases in which I have merely opened the frontal tissues, nor those in which I have removed bone-fragments without using the trephine. Of these forty-one cases, twenty ended in recovery and twenty-one in death, showing a mortality of a little more than 50 p. c. In many instances I have refrained from interference when other surgeons would have operated, so that my cases have been of an unfavorable type, and the mortality has no doubt been higher than if I had operated more indiscriminately.

The details of these cases are as follows: twenty-four were primary operations for compound fracture, with eleven recoveries and thirteen deaths; two were operations during the intermediate period, both successful, and three were secondary operations, with one recovery and two deaths, both in cases of abscess.

As far as it goes, this analysis confirms what has so often been pointed out, that there is not as much urgency in operating upon compound fractures of the skull as there is in the case of compound fractures in the extremities. In the latter, the sooner the operation is done, if the patient is able to bear it, the better. This has long been the rule in military surgery when amputation is required, and some years ago I collected extensive statistics from civil practice which showed that the same rule of procedure applied there. But this is not so in compound fracture of the skull, and the proportion of recoveries is larger in delayed cases than when the operation is done immediately, as is well shown by Bluhm's statistics. At the same time, in a bad case, where an operation is evidently necessary, I do not advise delay; but early trephining is not so imperative as in early amputation for compound fractures of the long bones. Trephining for suppuration occurring as the result of injury is usually fatal.

In three cases I have operated for syphilitic disease, with two deaths and one recovery. In the latter case, besides evidence of syphilitic brain-disease, there were painful nodes in the skull, and I operated by dividing the nodes with a Hey's saw, and then made a single opening with the trephine, so as to relieve the intracranial tension. The patient was much benefited for a time, and left the hospital relieved, though not cured. The fatal cases were in patients suffering from syphilis of long standing, with necrosis and intracranial suppuration.

I have been induced to trephine in three cases of epilepsy, all the patients recovering from the operation. One, an epileptic with suicidal tendencies, came under my care at the University Hospital in October, 1886. After the operation the patient was much benefited as long as he remained under observation. In the other two there was no evident improvement, though both did as well, as regarded the operation. In a case of melancholia, following an old fracture of the skull, trephining gave no relief, and in two cases in which I have operated for convulsions, etc., following old injury. one terminated fatally, while no permanent gain resulted in the other.

I have operated unsuccessfully upon three patients for the cerebral complications resulting from disease of the middle ear. Statistics show that many lives have been saved by trephining under these circumstances, but in my own cases, though abscesses have been reached and evacuated, the patients have died.

Although I have thus operated in twenty-one fatal cases by trephining, in only one case did the operation seem to have been responsible for the patient's death. This case was that of a child with a depressed fracture over the lateral sinus. On removing the depressed bone profuse hemorrhage occurred, and the patient died in consequence. I had not then learned the futility of attempting to check bleeding from the brain sinuses, except by prompt plugging. I have had four cases since in which the longitudinal sinus was opened, and in two of these the patients recovered. In a third, bleeding was readily controlled by pressure, but ultimately death followed, while in the fourth a clot had formed in the sinus, giving time to apply a lateral suture to the divided vessel. This case was an interesting one—it was that of a boy who had been injured by a nitro-glycerin explosion, a piece of metal being found lodged in the longitudinal sinus, causing a clot as mentioned.

As regards the locality of the injury, I find that of fractures involving the frontal bone, omitting those simply involving the frontal sinuses, there were five, with four recoveries and one death. These figures do not confirm the general impression that there is a special danger in fractures of the frontal bone. Indeed, much more depends upon the amount of injury to the brain than upon the place of fracture. In one case the indication for trephining was bleeding from the middle meningeal artery, and in that case the patient recovered. He was an athlete who, while playing foot-ball, came into violent collision with another player, sustaining a fissured fracture of the parietal bone. He was stunned at the time, but soon recovered consciousness; in the course of half an hour, however, convulsions came on, followed by coma. He was brought to the hospital and I applied the trephine, evacuating a considerable amount of clot; the patient made an uninterrupted recovery.

In terminating the discussion which followed this communication, Dr. Ashhurst said:

In reply to the last question, I wished to be understood as saying that I would not push the argument from statistics, and that in cases in which the operation was clearly indicated I would operate at once; but that in cases where there was a doubt in the mind of the surgeon as to whether he should operate or not, a short delay would not be as dangerous as it would be in the case of amputation. In cases of impacted fracture my experience has been, as a rule, not to interfere in the absence of symptoms. In cases where there is no opening into the cranial cavity and where there are no cerebral symptoms, I think that the surgeon is justified in waiting for more definite indications. At the same time I find myself more inclined to operate than I was twenty years ago, on account of the greater safety afforded by modern methods of wound-treatment.

With regard to Dr. Harte's question, I do not recall any case of discharge of brain matter from the ear; but loss of brain substance not infrequently occurs at the seat of fracture. With regard to the watery discharge from the ear, I have often observed that as long as the discharge continues the patient may do well, but that if it suddenly stops, the patient will probably become comatose and die in a few hours, the arrest of this flow seeming to increase the pressure upon the brain. Old residents of the Pennsylvania Hospital will remember a case under the care of the late Professor Joseph Pancoast, in which there had been such a free discharge from the ear that it had been collected in a cup to be measured. The cup was found empty in the morning, and upon investigation it was learned that the night-watchman had mistaken it for medicine and administered it to the patient, a teaspoonful every three hours during the night.

With regard to fractures at the base of the skull, I have not seen any case in which I thought trephining indicated. I think that an attempt should be made to prevent infection in these cases by cleansing the ears, and, as far as possible, the nasal and buccal cavities. After securing cleanliness, I rely upon the use of calomel and Dover's powder, with hygienic treatment, rest in bed, cold to the head, laxative enemata, etc., and by these means recovery will be obtained in a considerable number of cases.—*International Medical Magazine.*

A CASE OF CONGENITAL EXFOLIATION OF THE SKIN.—Sangster (*British Journal of Dermatology*, February, 1895) reported the case of a man who was affected with a skin-disease which had first appeared when he was three weeks old. Although his malady was always present, there were three or four attacks each year which reached a high degree of intensity. On examination the skin had everywhere a pigmented look. Extensive tracts of the body, perhaps involving the greater part of the extensor aspect of the arm or the outer side of the thigh,, were covered by a harsh, cracked epidermis, much of it thickened and divided into small quadrate areas. Where not so thickened the skin felt thin and paper-like. On picking up the partly detached margin of epidermis a sheet three or four inches square could be peeled off without pain. The surface beneath was grayish-white and smooth, and to the touch slightly sticky. Within a few hours the denuded surface became a red color and there was a smarting sensation, but nothing like a crust formed and the surface soon paled and became as it was before. There were other parts of the body where spontaneous exfoliation was taking place. The surface presented a ragged appearance, the flakes of epidermis looking as though stuck on. The recently denuded skin looked red, but was not thickened. The palms and soles were the only regions not exfoliating, and here the epidermis was thickened and bathed in sweat. The author believes the condition is a malformation of the skin, and congenital.

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ROBERT D. JEWETT, M.D., EDITOR.

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Editorial.

Dr. Payne's Murderer Acquitted.

We noted the fact in our last issue that the jury had returned a verdict of "Not Guilty" in the case of the State against Shemwell for the murder of Dr. R. L. Payne, Sr., a few months since. We were not able to keep up with all the testimony of the witnesses, as brought out at the trial, but it was substantially the same as was published in some of the State papers at the time of the tragedy, and how the "honorable jury," bound by solemn oath to render their verdict in accordance with the law and the evidence, could render such a verdict, is more than we can understand. It impresses upon us, more forcibly than ever, our conviction that the trial by jury, as we have it to-day, is an absolute farce, and more often fails than succeeds in doing justice to all. Knowing the record of Davidson county in such cases, it would not have surprised the people had the jury returned a verdict of murder in the second degree, or even manslaughter, either of which would have saved the prisoner's neck; but to have him turned scot-free is not merely a surprise to the people, but it seems to be a clear warning to them that if they expect protection, they must look elsewhere than in the courts of Davidson county. It is just such cases as this that make men take the law into their own hands and meet out speedy punishment to those who are a menace to the community. How can the people of Davidson feel safe with such a character turned loose upon them? Do those twelve men hold the lives of the best of their citizens as so valueless that one may destroy them at will, and then not only escape punishment, but be given perfect freedom, that when he again sees fit he may add another victim to his list? Either purify the jury-box or abandon it forever. Otherwise we must expect to see the outraged people resorting to lynch law to rid themselves of desperate and lawless men.

Abstracts.

THE ASEPTIC TREATMENT OF SUPPURATION.—Zeidler, of St. Petersburg (*Centralb. f. Chir.*, No. 14, 1895). The author says that late experimentation seems to be exposed to all wound disinfection. Reichel concludes, after experimentation on animals, that even extensive phlegmonous processes can be controlled by sufficiently free incision, and the excision of pus-infiltrated active tissue, and subsequent tamponade of the wound. Disinfection of the wound is therefore absolutely unnecessary. For the past two years Reichel has simply wiped out the cavity with sterile gauze, and packed it loosely with iodoform gauze, and he is well satisfied with the results. This method is not new, as it has been practiced many times before the experimentation was conducted. The advocates of antisepsis in operative wounds generally consider antiseptics essential in the cases of infected wounds. The author gives the details of his experimental work since 1888, and now for the past few years the following procedure has been adopted as a result of this experimentation.

In infected wounds the field of operation is prepared as usual. Before and after the operative manipulation the wound is wiped out with sterile gauze. As a rule, no irrigation is employed. If, however, it is necessary to irrigate, a 0.6 p. c. sterile salt solution is employed, the wound is carefully tamponaded with sterilized gauze, and over this there is a layer of gauze, then wood-wool, etc. When the dressing is changed the skin around the wound is cleansed with ether or benzoin, and the granulating wound dressed with sterile gauze without irrigation. In most cases the dry dressing is all that is necessary, but sometimes a moist dressing is more useful. When this is necessary a saline solution is employed. He believes that moisture is the most important point, and disagrees with Reichel in the necessity of employing disinfectants.

Suppurating wounds with an abundant supply of blood-vessels are infected sometimes, especially where the suppuration is profuse, and a dressing with alum acetate is employed. The efficacy of this dressing is, however, not due to any antiseptic effect, but to its astringent character. He does not consider that iodoform gauze is of any value in suppurating and septic wounds. He has never seen a decomposition of the secretions absorbed by the dressings, although the lower layer of the dressing has not been altered for about eight days. It is essential that the dressing should be hygroscopic, and that there should be free evaporation from its surface.

He has succeeded in cultivating pus bacteria from these wounds immediately after disinfection, and he does not believe that disinfection of these wounds is ever successful, while his results with the aseptic treatment have been very satisfactory, in fact, decidedly better than with vigorous antisepsis. Using this dressing, the local process in healing is much better, the secretion is diminished, the development of granulations proceeds normally, and these are not very exuberant, nor inclined to bleed, as is so frequently seen after the use of iodoform gauze. The dressing is only changed about once in eight days, and as long as care is taken to supply drainage, the course of the wound is perfectly normal. He therefore concludes that the very best treatment of suppurative processes is free opening and free drainage, and that disinfection of the wound is not only entirely unnecessary, but even injurious.—*American Medico-Surgical Journal.*

UNEXPECTED RESULT OF TAPPING THE HEART.—Sloan (*Medicine*) reports a case of accidental puncture of the heart after respiration and heart-action had stopped, followed by resumption of heart-action and recovery. The patient was a female, aged 19, a sufferer from erysipelas of the face. In previous years she had three attacks of acute rheumatism with mitral endocarditis. The erysipelas subsided, but a few days later there was evidence of pericarditis and of an aggravation of the endocardial affection. Marked effusion followed the pericardial inflammation, but the patient refused aspiration, though it was deemed advisable from her critical condition. Three weeks after the pericardial friction had developed death seemed approaching. The pulse was very rapid, barely perceptible. The physician was ready to aspirate, but still it was refused. As the physician stood ready to perform the operation respiration ceased and the heart stopped. To quote the author's own words: "In a moment of excitement I jumped up, seized the aspirator and plunged the needle into the fourth interspace, about half an inch to the left of the sternum and a little below the left nipple. To my astonishment, from eight to ten ounces of pure blood flowed rapidly into the bottle of the aspirator, then suddenly stopped, and, to my dismay, I found I had penetrated the cavity of the heart. As I was slowly withdrawing the cannula, regretfully telling the nurse it was all over and to close the patient's eyes, to my surprise the heart made first a feeble, irregular movement, then a sudden jump, and then finally, like a pendulum regaining its swing, it started to beat again." A somewhat rapid convalescence followed; within seven weeks the patient was in apparently perfect health.

In his conclusions the author raises the question whether, if accidental cardiac tapping was in this case, as in some others, followed by recovery, there is not a class of cases where it should be tried as a deliberate remedy, e. g., in cases of asphyxia, suffocation by drowning, accidental hanging, chloroform asphyxia, etc.—*Maryland Med. Jour.*

CASES ILLUSTRATING THE OPERATION TREATMENT OF ILIAC (SPINAL) ABSCESSES.—(Dr. James K. Young, Philadelphia, Pa., *N. Y. Med. Jour.*) In this case it had been considered advisable to either trephine the upper part of the crest of the ilium or remove a portion with a rongeur forceps, so as to permit the drainage-tube to lie flat in the iliac fossa. The latter had been done and had appeared to facilitate the drainage and healing of the abscesses rather than to retard them.

The frequency of these abscesses was well shown in Michel's statistics, in which out of forty-eight abscesses of spinal origin, thirty-nine, or 70 p. c., had been in the pelvis.

In regard to the treatment, the opinions of authorities ranged from extreme expectancy to early and radical operation. Two plans of treatment were offered—that of expectancy and that of incision and drainage. Cases were recorded in which, under expectancy, recovery had ensued—notably one each of Dr. Taylor's and Dr. Bradford's and Dr. Lovett's, and the speaker had one now under observation in which absorption appeared to have occurred.

There are two other methods to which attention must be called: 1. Repeated aspiration. 2. Injection of fluids to promote absorption.

The former was unsatisfactory on account of the non-withdrawal of caseous clots, and the latter dangerous, and in some cases fatal, from the absorption of carbolic acid. The objections to the early radical operations, especially erosion of vertebræ, was the high mortality, and Dr. Rupprech, of Dresden, had informed him six years ago that after a fair trial he had abandoned the radical operations, because 50 p. c. of the patients had died from the operation. The operation here advocated was performed under strict antiseptic precautions. The abscess was opened by careful dissection, it was thoroughly irrigated with boiled water and boric-acid solution, a long, grooved director was passed up to a point above the sacro-iliac juncture, and a straight, longitudinal incision was made upon it. A rubber tube was passed through and secured with safety-pins. Emulsion of iodoform (10 p. c.), one-half ounce, was thrown in, iodoform gauze packed about the wound, and a bichloride dressing applied.

The indications for the operation were: 1. Where the abscess was large and making pressure upon important organs. 2. Where the abscess was increasing rapidly in size. 3. Where there was danger of rupture of abscess into the peritoneal cavity.

THE MANAGEMENT OF SUMMER DIARRHŒA.—At this season of the year the summer diarrhœa of infants form a very prominent part of general practice. Dr. Herman B. Allyn has made a statistical and historical study of the subject in the *University Med. Mag.*, from which he concludes that:

1. The summer diarrhœas of infants are primarily instances of poisoning, the poisons being developed in the food, especially milk, or introduced into the stomach and bowels in some other way.

2. Apart from decomposition of food, the most important factors contributing to their fatality are high temperature, a bad sanitary condition of the district, uncleanliness of the house and of its occupants, and immorality of the parents or guardians.

3. The occurrence of these cases should be foreseen in winter and early spring, and efforts made then to secure better living quarters and the highest degree possible of nutrition and health in the infants.

4. The most desirable thing is a trust-worthy source of fresh milk-supply. In the absence of the milk laboratories of Boston and New York, it is the personal duty of the physician to look carefully after the milk supplied to nursing infants. In young infants which have to be artificially fed, I have had the best result with peptonized milk.

5. No infants should pass the summer in the city if they can be removed to the country under fairly good surroundings. This should be done as a precaution before July and before they are ill. If summer diarrhœa develops, removal to a cooler place, where fresh milk can be had, should be accomplished as soon as possible.

SULPHUR AS A SUBSTITUTE FOR IODOFORM.—At a recent meeting of the Royal Medico-Chirurgical Society, Mr. Arbuthnot Lane read a paper on the employment of sulphur as a germicide dressing. He took the dressing up as a non-poisonous substitute for iodoform, from the effects of which he lost a patient last year. He began to use it about a year ago in disease of the hip-joint, and naturally found that it produced a sharp caustic effect on the tissues, with escape of sulphuretted hydrogen. He reported cases of extensive tubercular disease of elbow, knee, tarsus, prostate and spine, or septic gangrene of the leg, of lupus and of carbuncle. He found he could sterilize healthy tissues, so far as organisms are concerned, by applying the powder for twenty-four hours, but in granulating parts, or such as were badly supplied with blood, as, e. g., the brany edge of carbuncles or spreading gangrene, a much longer time was required. No doubt the sulphur is slowly oxidized, and the sulphurous acid is the real disinfecting agent. Some of this is further oxidized, and the sulphuric acid which results is responsible for the caustic action observed. Still, as Mr. Lane found the dressing painless, the caustic acid must be formed very slowly and to only a slight extent. It was suggested that sulphurous acid might as well be used directly, as it was at Metz during the Franco-Prussian War in 1870, with very great success. But even long before that time it was loudly applauded as the great sulphur cure for diphtheria, foul abscesses, and other conditions where its disinfecting power could be utilized in liquid and in sprays. The powder has also enjoyed considerable repute in diphtheria and other diseases. There are, no doubt, cases in which the sulphur in powder is not only the most convenient form, but one in which the gradual development of the gas may be the most effectual. Mr. Lane may, therefore, be commended by reinforcing the use of one of the most ancient remedies, though all he stated could have been forestalled by therapeutists who know the history of remedies.—*Med. Record.*

TREATMENT OF URIC ACID GRAVEL.—Henley writes in the *British Med. Jour.* for March, 1895, that the treatment of uric acid gravel takes two directions, according as we desire to increase the solubility or decrease the amount of uric acid formed. It is well to remember that in the majority of cases uric acid deposits are due to an increased tendency to precipitation, and not to excessive formation of uric acid.

In cases due to an increased tendency to precipitation we have to give drugs which help to hold uric acid in solution. In spite of the recent outcry against piperazin, the writer has found it of great service, particularly in all cases in which gravel has been due to diminished solvents and not excessive formation of uric acid. In fact, it appears to have no action whatsoever on the quantity of uric acid daily formed in the organism, but merely on its solubility. On this account he gives it in such cases in combination with alkalies, either in the shape of alkaline waters or potassium bicarbonate combined with iodides. It is as well to remember that as the urine is naturally most acid at night and early morning, and therefore most likely to deposit uric acid, we can get over this by following Sir William Roberts' advice and give the alkalines at bedtime. The diet in these cases is not of so much importance, except in favor of salines and vegetables.

In cases, again, when the uric acid deposit is due to excessive formation, a carbohydrate diet is the most useful. Starch, sugar and vegetables should, therefore, be the staple diet, and meat and fish only in small quantities. The old idea that sugar causes an increase of uric acid has no foundation, as the writer found in a series of experiments performed on himself, when he took as much as a quarter, or even a pound, of sugar a day without causing any noticeable increase in the uric acid passed. Alcohol, on the other hand, should be prohibited, as it causes an increase in the quantity of uric acid voided.

Quinine and arsenic decrease the quantity of uric acid, beceuse they diminish the quantity of leucocytes, and therefore, in cases where gravel is due to an excessive formation of uric acid, they are most valuable. While moderate muscular exercise is of service, excessive exercise is, on the other hand, harmful.

In cases of excessive formation, although alkalies are of some assistance, they, like piperazin, are only of secondary importance by increasing the solubility of the uric acid formed.

The subject of treatment could well

be gone into much more fully, but we have said sufficient to indicate the general principles on which it should be conducted.—*Therap. Gaz.*

On Tapping the Pericardial Sac.—In December, 1891, a girl of 11 years was seen in a second attack of acute rheumatism, the first attack having taken place some years previously, when she was under the care of another practitioner. After the first few days following the onset of the symptoms of rheumatism, the breathing became rapid and labored, and on examination of the præcordial region a to-and-fro murmur was heard over the whole area. Dulness extended from the upper border of the second rib on the same side down to the upper border of the fifth rib on the same side as the child lay on her back. Sodium salicylate was given in 10-grain doses every four hours for three or four days. The joint-pains were relieved, but the effusion into the pericardial sac increased, rather than decreased, and the breathing went up to 60 in the minute.

In consultation it was agreed to tap the pericardium; but to confirm the diagnosis, the writer inserted a hypodermic syringe of 20 minims' capacity between the third and fourth ribs on the left side, and, close to the sternum, withdrew a syringeful of serous fluid. In a few minutes the patient breathed more freely and with less frequency, illustrating a point that has been emphasized by Prof. Sir Thomas Grainger Stewart, viz: that the withdrawal of even a small quantity of fluid from the vicinity of a vital organ makes a profound impression upon that organ. Hoping to get further benefit, the author advised and thought fit to remove a larger amount of fluid by means of the aspirator. He thrust in the needle near the original spot some five hours after the first operation, and withdrew two and a quarter fluid-ounces of a serous fluid tinged with blood.

He selected the space between the third and fourth ribs because it appeared to be the spot where the dulness was most marked.

Immediately after this second operation the breathing became more labored and the child appeared to be distressed to an alarming degree. However, in the course of half an hour she calmed down and became comparatively comfortable; but this was only of short duration, for in the course of an hour or more the breathing again became labored and more frequent, and the patient gradually sank, death taking place twelve hours after the second aspiration.

The writer would not again tap the pericardium in a case of effusion attendant on rheumatism, for he believes such cases are best left alone. He then relates in confirmation of this belief the following case:

A woman, aged 30, had repeated attacks of acute and sub-acute rheumatism, and in connection with the one related she had considerable effusion into the pericardial sac. The breathing was much affected, and to one inclined to aspirate there was every indication for performing the operation. Instead of doing this, the salicylate of sodium was given in medium doses, and a large amount of liquid nourishment was administered at frequent intervals. The result was that the woman got well in the course of a few weeks.—*Ibid.*

Bone Suture in Fracture of the Lower End of the Femur.—Walther (*Medicine Moderne*, April 20, 1895) reports a case in which the lower extremity of the femur was broken into three fragments, and the tibia was displaced backward, carrying one fragment—the inner condyle—with it. The joint was freely exposed and the fragments reduced and sutured in position. Twelve months the knee seemed rather large; functionally the result is perfect. The joint can be flexed to a right angle.—*Brit. Med. Jour.*, May 25, 1895.

Correspondence.

Editor N. C. Med. Journal :

Dear Doctor :—From the present outlook, the "Cotton States and International Exposition" will be one of the "events" in the history of our country, and especially of the South. Realizing the immense number of physicians who will be present, from all parts of the United States and other countries, I have decided to offer my mite of Southern hospitality to my visiting brethren. Therefore, I extend a cordial invitation to any physician who may visit our city to make my office his headquarters. Send mail, telegrams, etc., in my care, and I will cheerfully engage rooms, etc., in advance, for any one if advised to do so. The only request I make is to enclose postage for letters of inquiry, which will be cheerfully answered. For any services I may render no fee, commission or any perquisites whatever, will be received or expected.

Fraternally yours,
George Brown, M.D.
23½ Whitehall St., Atlanta, Ga.

OFFICIAL LIST OF CHANGES IN THE PUBLIC SERVICE.

THE ARMY.

From July 11, 1895, to July 24, 1895:

Bache, *Col. Dallas*, Assistant Surgeon General, Medical Director, Department of the Platte, is granted leave of absence for one month, with permission to apply for an extension of ten days, to take effect on or about July 20, 1895.

Alexander, *Col. Chas. T.*, Assistant Surgeon General, is granted leave of absence for two months, to take effect on or about July 13, 1895.

Corbusier, *Capt. Wm. H.*, Assistant Surgeon, will, in addition to his present duties, take charge of the Medical Supply Depot in New York City, during the absence on leave of Col. Alexander.

Polhemus, *Capt. Adrian S.*, Assistant Surgeon, is granted leave of absence for two months, to take effect after his return to his proper station, Fort

Douglas, Utah, and at such time thereafter as his services can be spared by his post commander.

Cabell, Capt. Julian M., Assistant Surgeon, is granted leave of absence for four months on surgeon's certificate of disability.

Middleton, Lieut. Col. Johnson V. D., Deputy Surgeon General, is granted leave of absence for one month, to take effect on or about the 23d July, 1895.

Gray, Capt. Wm. W., Assistant Surgeon, is granted leave of absence for two months, to take effect on or about August 1, 1895.

Robertson, Capt. Reuben L., Assistant Surgeon, resigned July 3d, 1895.

Miscellaneous Items.

Under this head space will be given (free of cost) to those paid-up subscribers who desire to change their location, or to dispose of practice or property. One insertion will be allowed, but inquiries must not be ordered addressed to this office.

Any news connected with professional men and matters in North and South Carolina will be appreciated by the Editor.

Drs. J. R. Irwin and C. A. Meisenheimer, of Charlotte, have formed a partnership, under the firm name of Irwin & Meisenheimer.

Third International Congress of Physiologists will convene in Bern, Switzerland, September 9th next, and will remain in session five days. The official languages will be English, French and German. Titles of communications may be sent to Dr. Frederick S. Lee, Secretary American Physiological Society, Columbia College, New York City.

REMARKABLE RESULTS BY PROFESSOR KOCHER IN THE TREATMENT OF GOITRE.—At the Congress of German Surgeons, which met on April 17th in Berlin, Professor Kocher, of Berne, reported that in the last nine hundred cases operated on by him the method of total extirpation was wholly abandoned, and only the partial operation was performed. Since proceeding in this way he has not had any cases of cachexia strumipriva except in one instance, where the remaining part of the gland was found to be atrophied. This case was cured by the internal administration of thyroid gland. Although he was well satisfied with his results, the mortality being only twelve per cent., he hoped that the number of operations would soon be reduced, and that internal medication would be substituted. He made a very remarkable communication, describing the influence of the internal administration of thyroid extract and phosphate of potassium, and showed several photographs of patients where the reduction of the gland after the use of these internal remedies was very obvious. His address was listened to with much interest, and caused a great sensation. Professor Mikulicz said that the internal use of thymus gland was also able to reduce the goitre. Professor von Eiselberg had not found this to be the fact in his experience.—*Med. Record.*

Cholera is getting a strong foot-hold in Japan, the mortality reaching about sixty per cent. It is hoped, however, that the Japanese authorities, with their modern ideas and intelligence, will hold the disease in check.

The *Southern Medical Record*, Atlanta, Ga., will hereafter be conducted by Dr. Bernard Wolf.

It is proposed to establish a memorial of the late Professor Huxley at the Charing-Cross Hospital Medical School to take the form of an annual lecture and a science scholarship and medal.

There is some prospect of a revival of the *Index Medicus* at a not very distant day. Two hundred subscribers of $25 each would ensure that desirable object.

Dr. Quill, of the *British Medical Staff*, in India, has treated a large number of cases of typhoid fever with chloroform and carbolic acid internally, and claims to have had excellent results.—*Ex.*

An account is printed in the *New York Sun* of the resuscitation of a workman in an electric light plant after receiving a charge of about 3,000 volts of electricity into his body. The men had been instructed in the d'Arsonval method of artificial respiration and it proved successful after about seventy minutes of apparent death.

Our subscription list is still open. Add your name to it, Doctor.

Reading Notices.

In prescribing the products of Manufacturing Pharmacists, we should be guided, to a great extent, by the business standing of the manufacturers. No other house in the South or West has a better reputation for strict integrity than the Robinson-Pettet Company, Louisville, Ky. We do not hesitate to recommend the preparations advertised by them on page 13, this issue.

Bromidia.—The steadily increasing use of Bromidia by the profession in all parts of the world demonstrates its great value as a hypnotic. If human testimony is worth anything at all, then Bromidia must unquestionably be the best and safest of all sleep-producers. Dr. Federico Tommasi, of Maggranico, Italy, on July 24, 1893, writes: "Although, as a rule, I do not approve of specialties, still, when I find an ideal one, both as regards therapeutic combination and pharmaceutical preparation, easily administered, prompt and certain in action, I value it. Bromidia fulfills all these conditions. I have obtained especially gratifying results by its use in two cases—one heart disease, the other acute lumbago. In both cases it promptly relieved the pain, produced tranquil sleep, with no disagreeable after-effects."—*The Memphis Med. Monthly.*

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Original Communications.

TREATMENT OF DIPHTHERIA.

BY R. A. PATTERSON, M.D., Aurelia Springs, N. C.

Now, that the treatment of diphtheria by the antitoxin method seems threatened with falling into the "innocuous desuetude" which has overtaken tuberculin, and reports are coming from all parts of the world of disagreeable complications and symptoms following its application, perhaps some practitioners, while willing to think and act fairly towards all new departures, are not enthused with every new device, however impracticable or hazardous. Perhaps some of this class will patiently listen to the statement of some facts and figures in connection with a different system of treatment carefully pursued and described—a plan entirely safe, easy of application and perfectly consistent with the pathology of the disease and will prove more efficacious than the most earnest advocates of antitoxin claim for it.

The system of treatment referred to was set forth in a paper on diphtheria which the writer read before the North Carolina Medical Society for 1893, at Raleigh, and which was published in the Transactions

It will not be denied that from the pathology and symptoms the antidote must be distinctly antiseptic and germicidal, also that it must be tonic and alterative. The disease is rapid in its course and the success of any line of treatment must depend greatly on an early application of the remedies, for if, through delay, it is allowed to enter the air-passages, the chance of recovery is greatly lessened.

Entertaining this view, and adapting the treatment thereto, the phenominal success of it verifies its correctness and proves it to be founded on scientific principles and to be devoid of empiricism.

Before detailing the plan of treatment, the outline of the history of some epidemics and sporadic cases which came under the observation of the writer extending back through years will be premised.

In the autumn of 1886 an epidemic of diphtheria occurred in a locality between Weldon and Gaston, in the county of Halifax, whether through contagion or neglect of sanitary precautions, did not appear. There were many fatal cases—in one instance three in one family—and the attending physicians pronounced it to be of a most malignant type. The epidemic extended and entered the bounds of the writer's practice. The first case had his most careful attention. The course of treatment was such as had been inculcated by reputable authors. In spite of every means, it marched steadily on to a fatal termination. The disease spread from family to family; but before being called to another case, the plan of treatment to be cited occurred to him, and in the twenty cases following there was not another death, nor has there been another in his practice since, except one, who was nearly asphyxiated and died in a few hours after being seen, and another who was in "articulo mortis." Let it not be averred that the disease referred to may not have been diphtheria, since there was no microscopic examination made. This would be a lame argument, provided the other unquestionable symptoms were present. For it is claimed that there are two distinct diphtheria bacteria, with absolutely no morphological distinction, the one poisonous and the other innocent. To claim, therefore, that it might not have been diphtheria because there was no microscopic examination made, seems absurd.

The success of the treatment annihilated the epidemic, as there were very few cases outside, and, adopting my plan of treatment, the attending physician was entirely successful, saying there was no use in looking further for a remedy for diphtheria, for that was the thing.

In years next succeeding sporadic cases occurred from time to time, which yielded to the same treatment. In the autumn of 1892 the writer was called to the case of a girl, aged about 12 years, who had been under treatment of a practitioner for five or six days and declining steadily, till at the time he saw her she was in a dying state and departed the succeeding night. This case was followed by three others in the same family and which were arrested before becoming very serious. Another child in the vicinity was attacked and the parents having had experience with the disease before, applied the remedy as soon as it was detected, and it was arrested at once. During the next week, in a family near by, in which there were seven children between the ages of 2 and 18, the disease presented itself. Having been called to its treatment and the mother being a woman of strong sense and a good nurse, the medicines were prepared and directions given and the management of the cases committed to her. She carried them all through safely without other medical advice.

We now come to the indications of treatment as suggested by its known features. It was stated above that germicides and tonics have yielded the best results.

Some years back, in a prize essay by the late Dr. E. S. Gaillard, he warmly advocated a combination of muriatic acid, tinct. mur. iron and potassium chlorate to be taken internally. This was a most fortunate conception, for this combination, on the addition of water, sets free much of that efficient and excellent germicide chlorine, and yields to the system the tonic iron so much needed in the asthenic condition of the system appertaining to this affection. It is a remedy highly approved by many and will undoubtedly prove curative in some cases.

A combination of pinus canadensis and phenic acid applied locally has been much exalted, and it is affirmed has of itself cured many cases.

The pinus canadensis was a favorite remedy with the late J. Marion Sims for inflamed and ulcerated surfaces. The addition to it of phenic acid brings another powerful antiseptic to the aid of chlorine, and the septic tendency of the disease seems to yield at once to the potency of the two.

Now, it occurred to the writer that if this constitutional remedy, as suggested by Dr. Gaillard, and the excellent local application of the pinus and phenic acid were used in conjunction, they would most probably arrest the rapid advance of sepsis. The result, after long and repeated trial, has verified his most sanguine hopes, and in these two applications, constitutional and local, we have a remedy, a specific, for diphtheria, if there is a specific for any disease. So that, while the writer claims no credit for the disunited elements, he does claim to have first suggested, so far as he knows, the combination, which seems to be the *ne plus ultra* as to treatment of diphtheria.

The details of the treatment are these: As soon as the patient is seen, and not delaying for the action of a cathartic or other medicine, begin to combat the poison at once, by the administration of two tablespoonsful every hour, for adults, and proportionally less for children, according to age, of the following preparations: Potassium chlorate 1 drachm, tinct. mur. iron, 2 fluid drachms, dilute muriatic acid 2 fluid drachms, water 12 fluid ounces, diminished to one or two doses at night, with tonic doses of quinine, three times a day. The above compound is easily taken by children. Immediately after its administration proceed to mop the throat, depressing the tongue, with a mixture of fluid extract of pinus canadensis (Kennedy's preferred), one fluid ounce, and phenic acid, from ten to fifteen drops. The mopping to be repeated after each dose of the solution. The mop may be made of a small twig, with a little lint or rag bound to the end. This simple implement is given instead of a more artistic one, because so easily obtained. The mopping should be done gently, so as not to wound the tender mucous membrane. Petroleum, applied externally to the throat, is not objectionable.

Under this treatment improvement begins at once, the fibrous matter ceases to increase, that which already appears stained black by the red pinus, contracts around the edges and soon drops off, and amelioration of all the symptoms becomes obvious.

A CASE OF INTESTINAL OBSTRUCTION BY WORMS.—Davis (*Virg. Medical Monthly*, 1895, No. 12, p. 1210.) Worms are held accountable for numerous ailings of childhood, but it is certainly rare for them to cause intestinal obstruction. A boy, aged 4 years, with symptoms of intestinal impaction, which the father ascribed to worms, was given 2-gr. doses each of calomel and santonin every hour for five doses, and followed by 6 dr. of castor oil, with 4 min. spirits of turpentine. A scanty movement with two round worms resulted in 24 hours. A day later child was suffering severe abdominal pain; pulse small and thready, temperature 100.5°; tongue heavily coated, brown and dry; nausea and vomiting at intervals; face wore an anxious expression. Abdomen was tender and four or six nodules were felt on palpation. Diagnosis: Worms forming nodules and causing obstruction. Calomel and santonin were given in same doses as before three times, followed by castor oil, 6 drachms, with croton oil, $\frac{1}{3}$ min. Croton oil, min. $\frac{1}{3}$, was repeated in four hours, and again in two. In ten hours the child passed a knot of ten worms. All but two nodules had disappeared from abdomen. Moist and dry heat were applied on abdomen, but in 24 hours there had been no movement, and two nodules remained. Four powders of calomel and santonin (same doses), q. 1 h., and followed in two hours by castor oil, 6 drachms, glycerin, 1 drachm and croton oil 1 min. This acted well, and two nodules containing twenty-seven worms were expelled. More worms were passed next day—in all, eighty-one. The temperature during the illness did not rise above 100°, and child made a good recovery.

ANTITOXIN IN THE TREATMENT OF DIPHTHERIA.

By Albert Anderson, M.D., Wilson, N. C.

In 1883 Klebs, in his investigations as to the cause of diphtheria, found a bacillus in false membrane from a diphtheritic throat. Loeffler, in the following year, isolated the bacillus, discovered its culture medium, reproduced the disease in animals with all the symptoms except paralysis. Four years later Roux and Yerson, of Paris, produced this symptom, and thus gave to the world all the necessary proofs of a specific pathogenic microbe, namely:

(1) Its constant presence in all cases of the disease.

(2) It is never found in the body except during the course of the disease or incubation period.

(3) Reproduction of the disease when properly introduced into an animal susceptible to that particular disease.

Scarcely had these proofs been given to the world before the principles of a specific remedy were conceived in the minds cf a few distinguished bacteriologists in different parts of the world.

The pioneer in this great work was our countryman, Dr. George F. Muttall, of Johns Hopkins University, the first to discover the bacteriocidal properties of the blood. Among his colaborers, faithfully as well as scientifically working upon the basis of this discovery, may be named the Frenchman Roux and the German Behring as occupying the next places of honor in the galaxy of original investigators. The result of their labors and of others is antitoxin—the serum from the blood of an animal "rendered refractory to the disease of diphtheria." It is a pale, amber-colored liquid. What I know of the process of making this serum is from observation and study of Dr. J. J. Kinyoun's work on this line during my stay in his laboratory last January and February. Through the kindness of the State Board of Health I spent about six weeks pleasantly and profitably under the instruction of Dr. Kinyoun and his able assistant, Dr. Rosenau, mainly in the study of bacteriology.

At Washington the horse is used to obtain the serum. He is first examined as to his health. Mallein and tuberculin are injected at different times to diagnose respectively glanders and tuberculosis. If there is no reaction and the horse is apparently healthy other ways, he is selected.

To immunize an animal it is not necessary to inject the bacilli of diphtheria, but their toxins answer the purpose better. Dr. Kinyoun's method in preparing toxin is as follows: A virulent culture of the bacillus diphtheria, capable of killing a 500 gram guinea pig in 24 or 36 hours, is put into a flask containing alkaline peptone bouillon. This flask remaining in the thermostat

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*Read before the North Carolina Medical Society, May 15, 1895.

twenty-four hours at 36° C., grows sufficiently rich in bacilli to be termed a stock culture. Forty c.c. of this inocculates a certain quantity of sterilized alkaline peptone bouillon, which is put into a flask, having a straight neck and a small opening at the side connected with a tubulature. Several of these are inoculated at one time. Placing them in the thermostat at 37° C. for 24 hours to start them, when each flask is connected with an aspirator for the purpose of passing a moist current of air slowly through the bacilli from mouth to tubulature. After about three week's growth these cultures are filtered through a Chamberland filter tube into sterilized flasks and kept for use: If $\frac{1}{10}$ c.c. of this toxin will kill a guinea pig of 500 gram weight in 24 hours it is considered of standard strength and toxins are graded according to this standard. This is now injected into the horse selected subcutaneously, starting with 0.5 c.c. and gradually increasing the dose as tolerance is established, till 300 c.c. or more may be injected at one time—this producing no general reaction, but only a local œdema, which disappears in a short time. This condition indicates immunization. It has been found necessary to give large and frequent doses of toxin late in the treatment to produce a good quality of antitoxin. To test the strength of the serum, only a small quantity is first drawn. A protective strength of 1 to 50,000 is good serum. For drawing a large quantity of blood, the necessary apparatus consists of a trocar and canula, a rubber tube 20 inches long, one end attached to canula and the other to a glass tube about 10 inches long; this outfit is sterilized and kept in a 5 p. c. solution of carbolic acid. Wide-mouthed bottles, holding about two quarts, are used for receiving the blood. In preparing the bottles, a piece of paper is tied over each mouth and another piece in the shape of a hood is placed over this and then sterilized.

Preparation of the Horse.—A nip is thrown over the lip of the horse and a cloth over his eyes for a blind-fold. Hair over the place selected to enter the jugular vein is clipped and shaven and the skin scrubbed well with a 5 p. c. solution of carbolic acid. Incising the skin down to the vessel, the trocar is thrust into the vein with a steady hand. The assistant, removing the hood of paper, plunges the glass tube into the bottle through the paper and the operator or another assistant compresses the veins below and the blood begins to flow. After drawing about a quart into each bottle, the assistant withdraws the glass tube and immediately replaces the hood of paper. From three to six quarts are drawn at one time. The blood is allowed to coagulate and then removed to an ice-chest in the laboratory to stay 24 hours, in which time the serum separates sufficiently from clot. The serum is then drawn off with sterilized pipettes into a receptacle, after which it is passed through a Chamberland filter, one-half p. c. trichresol solution is added for preservation, and in this condition bottled for use.

A syringe named after Roux is used for injection. It holds about 20 c.c. It is composed of a barrel consisting of metal and glass, which are separated by two India rubber washers, an India rubber piston, a rubber tube with adjustments and a needle little larger than an ordinary hypodermic. The adjustable rubber tube serves an evident purpose in case the child moves. This syringe is sterilized in boiling water for five minutes before using. When ready to administer the serum, thoroughly cleanse the site of insertion and charge your syringe with just the amount to be used. Gather a fold of this skin in the flank with the left hand, insert the needle with the thumb and index-finger of the right hand at the base of the fold, allowing the barrel of the syringe to rest between three fingers and the palm of the right hand. Now, taking the syringe into the left hand, the right is used in gently pressing the piston with a gentle rotary motion. Place absorbent cotton over the puncture and the serum that flows back through the orifice, meeting with the cotton, forms a good serum plug. No massage is necessary after the injection.

The age of the patient, duration of the disease and severity of the case must determine the dose. As a prophylactic it has a better record than as a remedy. There has been no failure to protect when genuine serum has been given in time and in sufficient quantity. Wherever children are necessarily segregated, as in the family, schools, asylums and other such places, an injection of 5 c.c. for children under 10 years, and over that age 10 c.c.. This is thought sufficient to protect for about two months.

In a suspected case of diphtheria administer a full dose of antitoxin. Make a culture at once, and in 24 hours you can tell whether you have the bacillus diphtheria. If not found, discontinue your serum. If found, the symptoms on the following day will indicate the size of the dose. Some give half dose if symptoms are mild, and others give none. If there is no improvement, give full dose during the day, preferably in two divisions, 10 c.c. in the morning and 10 c.c. in the afternoon. If there be found a mixed infection, streptococci with the bacilli, and the pulse, respiration and temperature indicate an alarming condition, you have to give full doses on two or three consecutive days. An ideal remedy would in such cases be an antistreptococci with the antitoxin. The presence of streptococci or other cocci does not interfere with the action of the serum, but the serum does not act on them, or remove the septic influences of the pyogenic microbes. If these poison and degenerate the cells beyond the reach of stimulation from antitoxin, your patient will die of septicæmia and not of diphtheritic toxæmia.

From 89 to 94 tracheotomies gave 85 p. c. mortality, while the serum treatment has not only reduced this frightful mortality half, but greatly reduced the number of cases requiring the operation. Given in time, paralysis, pneumonia, albuminuria are rare complications.

D. Kinyoun saw 82 cases treated with serum in Paris, of which 3 died, making about 4 p. c. mortality. Thirty cases in Berlin during two week's stay, and he observed equally as remarkable results. The serum was exhausted and there was none for six weeks in August and September. During this time the disease increased the mortality. Out of 37 tracheotomies all died but 5. The following six weeks, with the use of antitoxin, there were only 8 tracheotomies and of these 4 died.

D . L. Emmett Holt has had 20 cases treated with antitoxin up to the middle of April, and all recovered except a baby suffering from marasmus.

My friend Dr. W. T. Pate and myself saw five guinea pigs inoculated with from $\frac{1}{11}$ to 1 c.c. of toxin, giving to three at the same time $\frac{1}{10}$ c.c. of antitoxin, leaving the two receiving the least quantity of toxin as contral. The contral pigs, in 24 hours, were nigh unto death; the other three did not even even get sick. Two rabbits were inoculated with pure culture on trachea and left for 24 hours, when the sickest was given 1 c.c. of antitoxin and the other left as control and soon death controled him, and the other, by the aid of antitoxin, was enabled to gain the victory over death, diphtheria and degeneration.

We did not see it sufficiently tried on patients to express an opinion, but doubting as we were, to us *venit vidit vixit* our doubts. The following is what I have read from a personal letter: "Were I to have diphtheria I would have the serum administered, because I believe it the best agent we now have, remembering it is not a cure-all." Two hospitals in Paris—one not using the serum had 60 p. c. mortality—the other using it in the same epidemic and at the same time had 24.5 mortality, showing a difference of 35 p. c. in favor of antitoxin. Many months ago unbiased observers admitted, and still admit, that the mortality rate has been divided by two since the use of antitoxin.

These are my deductions:

1. It acts as a specific against diphtheritic toxæmia.

2. The earlier administered the better to limit the disease and prevent complications.

3. It does not restore any degeneration produced by the previous work of toxæmia and septicæmia.

Ophthalmologists who use the ophthalmometer and who ofttimes find the corneal reflection dull and obscure, with no apparent reason, will find that a drop of liquid albolene instilled into the eye will yield a brilliant result in making the images sharp and clear-cut and with no effect on the estimation of the astigmatism.—*Ex.*

CLEAN MIDWIFERY, WITH REPORT OF A CASE OF UNCLEAN MIDWIFERY.

By F. H. Russell, M.D., Wilmington, N. C.

By clean midwifery is meant midwifery not encumbered with anything useless—perfect, complete. Its principles are simple, its practice easy, requiring the virtues, perseverence, patience, thoroughness. Its results are too well known to dwell upon, depriving child-birth of much of its former horror, robbing death of many of its fairest victims, women in the prime of life performing their office of mother and help-mate, the time of all times at which they could least be spared.

History.—This dates from the time when the true pathology of diseases of the puerperium was first properly appreciated, which was the key-note to their prevention and successful treatment. In the time of Hippocrates and Galen the results of unclean midwifery were thought to be due to the suppression of the lochia, this doctrine holding sway for about twenty centuries. This was followed by the doctrine of milkmestassis. These in turn were followed by the doctrines of inflammation of the womb, peritoneum, veins and lymphatics. Many considered it a specific infectious disease, such as typhoid fever. In 1850 Sir J. Y. Simpson published a paper entitled "The Analogy between Puerperal and Surgical Fever," which was the beginning of the modern doctrine. Several years previous to this Semmelweis asserted that puerperal troubles were common in the practice of those who examined patients after performing post-mortems, or students attending patients while working in the dissecting room. He was considered a crank, and was rewarded by ridicule, but with the advance in other branches of medical science, this branch also advanced, and to-day it is an established fact that puerperal diseases are due to germs, either putrefactive or infective. The putrefactive germs are termed bacilli, and depend for nourishment upon some foreign proteid substance, such as blood-clots, pieces of membrane, etc.

Their excreta are called ptomaines, which are capable of absorption by the uterus and are the offending agents. Puerperal troubles due to this cause readily respond to treatment, because as soon as the uterus is cleaned out the supply of ptomaines cease and the organism, with its wonderful eliminating glands, soon dispose of the dose it has. The infective germs are termed streptococci; these possess the power of invading living tissue and are in themselves poisonous. This germ is the cause of the true infective puerperal fever, although the putrefactive germs are found with it. These germs must get into the system before they can cause trouble. Their avenues of introduction are seven in number:

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1. The genital passages, as by an examination with a septic finger, filthy clothes coming in contact with the vulva, or by the patient's scratching her vulva with a septic finger; it has been said that the water-closet has acted as a source of infection by the mucous membrane of the vulva coming in contact with the foul emanations from the sewer.

2. Wounds of the genital passages.

(*a*) Lacerations of cervix.

(*b*) Lacerations of vagina, the base of the clitoris, is a favorite place for laceration.

(*c*) The perineum.

(*d*) The head lying in one position too long, may cause sloughing of the underlying tissue.

3. The bladder, either introduced by a catheter, or may wander from the vagina; from the bladder they may wander through the ureter into the kidneys.

4. The rectum, as by a septic syringe nozzle.

5. The breast.

6. Respiratory organs.

7. Intestinal canal.

Having seen that there is a germ capable of introduction by the above-named avenues, and knowing the dire results which follow its introduction into the system, it became evident that if the germs were prevented from entering the system the puerperium would be robbed of its dangers. As we all know, this has been demonstrated by clinical facts. The prevention comprises clean midwifery, which involves three factors—the patient, physician or nurse, and the surroundings. The surroundings necessarily depend upon circumstances. It is those in the middle and lower walks of life whose surroundings we must modify. As to the room, it should not be too small; it should be exposed to sun-light, if possible, and be well ventilated. If the bed has been in use long, it should be scrubbed up and sunned. A mattress should be used and all unnecessary clothes. ornaments and furniture should be moved out. For a bed-protector there is nothing better than a piece of oil-cloth, or a piece of canvass which has previously been boiled. The bed linen is put on fresh, and then the bed is ready for the patient.

As to the patient, she should take a thorough bath with warm water and soap. She should have a copious enema of warm water and soap. The vagina should be douched with a 1 to 2000 bichloride solution. She should clean and cut her finger-nails, and when the physician has prepared his antiseptic solution she should soak her hands. She should put on fresh linen; after this an antiseptic pad should be placed over the vulva; one may easily be made by wrapping a piece of absorbent cotton or oakum in sterilized gauze, and the breasts and axillæ, after a thorough scrubbing with a boric acid solution, are to be covered with borated cotton, kept in place by a sterilized binder.

As to the physician, his hands and arms should be prepared as follows: Nails cut and cleaned, hands and arms scrubbed by means of a brush with hot water and soft-soap, then washed in plain water, next immersed in a hot bichloride solution, 1 to 2000, in which they should remain for three minutes; if they are simply rinsed it does not wet the several layers of dry, horny scales which form the stratum corneum of the epidermis, beneath which the germs may hide and remain unhurt. The hands should be allowed to dry—never use a towel; next they should be immersed in a 5 p. c. solution of creolin, remaining for one minute. This is antiseptic and lubricant; in the lying-in hospital of the University of Maryland the rules relating to the time were very strictly observed. Some claim that it is unnecessary to use bichloride, soap and water being sufficient, but for the busy practitioner, who makes, possibly, a rectal and vaginal examination of one patient, lances a felon for another, is then summoned to a case of labor, for the benefit of his patient he should use bichloride. I mention bichloride because it is the neatest, least troublesome and among the best antiseptics. An apron should always be worn, pinned to which should be a sublimated towel, which is useful. In this connection it is well to remember that failure to carry out the minutest details in antiseptics may lead to disasters of the greatest magnitude. Remember the old expression, "*omnia ex ovo.*" Vaginal examinations should be as few as possible. The third stage of labor should be carefully managed or clean midwifery may fail. In those cases where it becomes necessary to separate the placenta from its attachment or in any way interfere with its delivery, it should be carefully examined to see if any part has been left. At the end of the third stage a hypodermic of strichnine-nitrate, one-fortieth of a grain, should be given and a nose of ergotole or fl. extract of ergot.

The strychnine tones up the muscles, acts as a general stimulant and lessens the shock which necessarily follows labor. Ergotole insures better contraction of the uterus, thereby forcing out all clots which otherwise might be retained and become infected. This is more important in multiparæ, as with each succeeding labor the uterus becomes more inert. During the interval between the second and third state of labor sterilized gauze, wet with an antiseptic solution, should be kept over the vulva. After a normal labor it is unnecessary to use an antiseptic douche, as the placenta wipes out the canal, and this is followed by a douche of blood from above.

Nature's Antiseptic Fluid.—In many cases in which the strictest antiseptic precautions have been observed we will have fever, temperature 100°, but it will be noted that the patient is cheerful and does not feel sick; this is Volkman's aseptic fever, due to the absorption of blood serum. The nurse should prepare her hands just as the physician, except the creolin solution; this should be done each morning before making the patient's toilet, and if she has occasion to touch the cord she should be careful not to hand the mother a cloth before cleansing her hands, or otherwise convey germs to her.

Van Horn and Ellisou, Park Avenue, 41st Street, N. Y., prepare an obstetric case which constitutes a valuable armamentarium; it consists of 2 sterilized bed-sheets, 4 doz. sterilized vulva pads, one 4-qt. douche bag, with glass nozzle, 1 zinc douche pan, 2 sterilized mull binders, heavy, 5 yds. sterilized gauze, 1 yd. 10 p. c. iodoform gauze, two 3-inch heavy mull bandages, sterilized, 1 lb. sterilized abs. cotton, 1 sterilized nail-brush, two 12-inch papier-mâché basins, rubber sheeting, 1¼ yds. by 2 yds, rubber sheeting, 1¼ yds. square, rubber on both sides, safety-pins, 2 ozs. carb. vaseline, 4 ozs. powdered boric acid, 4 ozs. 50 p. c. carbolic acid solution, 2 ozs. green soap solution, 2–100 grms. chloroform, 1 oz. f. e. ergot, 1 small bottle bichloride tablets, 1 small bottle sterilized tape.

The physician should always see that the breasts are properly cared for during the last weeks of pregnancy, the nipples should be washed in a solution to harden them. Listerine and alcohol, equal parts, answers the purpose, gently drawing them each day also prepares them. Mammary inflammation is preceded by infection of the nipples, as a fissure or excoriation of the nipple; this can be prevented by keeping the nipples clean, using a weak solution of boric acid just before and after nursing. Attention to the cord also comes in the domain of clean midwifery. I always treat it as if it were the stump of an arm I had amputated. Wash it off with plain water, then dust with iodoform and put on iodoform gauze, 10 p. c., over this a piece of borated cotton, then the bandage. This need not be opened in four days. Equal parts of acetanilide and boracic acid and carbolized gauze would probably do as well, and be more pleasant to those around.

A Case of Unclean Midwifery.—The majority of troubles after child-birth at the present time, we might say, are caused *directly* by the ignorant granny of to-day, about which enough has been written, and *indirectly* by germs. For this reason the young physician is called upon to treat most of the unclean midwifery, as his practice is largely among those who are dependent for treatment upon midwives.

Case.—Mrs. C., American, married, age 32 years, was delivered of her fifth child, a boy, weighing about seven pounds, December 3d, 1894, after a short and normal labor—a midwife officiating. On December 6th says "she had a chill but no pain." December 7th chill and general pain. I was called in December 8th—respiration 28, pulse 140, temperature 105°, countenance very anxious, vomiting frequently, complete anorexia, tongue heavily coated, tympany marked, tenderness over abdomen, offensive diarrhœa.

Treatment—No anæsthetic given. She was put on a table, the external genitalia and surrounding parts were scrubbed with pearline, the vagina washed out with a 1 to 2000 solution of bichloride. The instruments having been sterilized, the patient being on her back, an Edebohl's speculum was introduced (this is preferable for this class of work, as it is self-retaining); the uterus pulled gently down with a Skene's tenaculum, the entire inner surface carefully scraped with a curette; a small quantity of decomposing blood-clots was scraped out; involution had not begun and the organ was very tender. An intra-uterine douche of 1 to 3000 bichloride solution was given, continuing until the solution came away clear. Then the cavity was packed lightly with iodoform gauze, 10 p. c.

I think this a very important part of the treatment. It acts as (*a*) drainage; (*b*) hæmostatic; (*c*) stimulant—it stimulates the uterus, causing contraction, thereby promoting involution—(*d*) it is a good mode of applying a reliable antiseptic to the uterine cavity; (*e*) if there is a pus-producing surface at the late placental site, by its antiseptic and stimulating properties it sets up healthy action; (*f*) it aids in the production of a hasty convalescence; (*g*) it prevents endometritis, salpingitis, ovaritis, uterine displacements, leucorrhœa, etc., from following in after life.

The introduction of the gauze is greatly facilitated by the use of a Polk's applicating speculum. By its use the irrigation is better done.

The vagina was then washed out with bichloride solution, 1 to 2000, and packed with iodoform gauze and an antiseptic pad applied to the vulva. While the treatment was being carried out the bed-clothes were changed, all unnecessary furniture and clothes were removed and one quart Platt's chlorides sprinkled around.

December 9th respiration 23, pulse 90, temperature 99°; elixir iron, quinine and strychnine ordered three times a day, with milk-punches.

December 10th, respiration 22, pulse 84, temperature 98½; vaginal gauze removed and fresh introduced.

December 11th, respiration 22, pulse 80, temperature 99°; vaginal and uterine gauze removed and a carbolized douche given and an antiseptic pad re-applied. Recovery continued uninterrupted.

Other cases illustrative of this plan of treatment might be reported, but I deem this sufficient.

DISCUSSION.

Dr. Booth had noticed one sentence which was not in the paper, but which was inserted, as he heard, that he had been in the habit of giving $\frac{1}{40}$ grain of nitrate of strychnine to make the uterus contract. That seemed very good treatment, but he said he would give it in even larger doses after hearing the discussion this morning. The giving of strychnine in these heroic doses is going to get somebody into a scrape. We must not forget that we may meet a patient who cannot stand such large doses. He related the following case: He had been called to see a bad case of typhoid fever. The patient was nearly dead, having had hemorrhage. The physician who had called him in consultation wanted to give $\frac{1}{20}$ of a grain of strychnine under the skin, and did so. In less than a half hour the fellow had a convulsion and died right there. Some people can take more strychnine than others. He would have given this fellow $\frac{1}{30}$ of a grain, and, if necessary, after awhile have given him another $\frac{1}{30}$. It will not do to give these heroic doses of strychnine.

Dr. Faison rose to say that they were talking of cases where there was absolute necessity to do something, not where there were two or three weeks for treatment, but in cases after post-partum hemorrhages. In such another case as the author had given he would not hesitate to give $\frac{1}{10}$ of a grain of strychnine; in a case of post-partum hemorrhage he would not hesitate to give $\frac{1}{10}$ of a grain of strychhine at one time.

Dr. McMullan said that he would not give a patient more than $\frac{1}{20}$ of a grain the first time, and if he was not better in a half hour he would give another dose.

Dr. Sykes said that a great portion of the audience were young men and some of them might make a mistake. In a case which he attended he gave $\frac{1}{60}$ of a grain and she had convulsions from 10 in the morning till 12 at night. It was a case of abortion, but not such as had been described in the morning. It was his candid opinion that the young men of the profession had better be very careful about giving $\frac{1}{10}$ of a grain of strychnine. He had seen a case in which 2 grains of morphine were given in doses of $\frac{1}{4}$ of a grain at a time, which was repeated until relief came, which was forever, for he went to sleep and never waked again. He appealed to the young men of the body to give these potent drugs in small quantities. If large doses are given and the patient lost, then the reputation is lost, and a reputation lost cannot be builded again. Be careful until your reputation is established, so that the death of your patients will not damage it.

Dr. Burroughs thought that he had used it as freely and in as large doses as any man in the State. He meant nitrate of strychnine. He had had Parke, Davis & Co. make him some tablets $\frac{1}{16}$ of a grain and some containing $\frac{1}{8}$ of a grain. He had treated probably several hundred patients with strychnine, giving it twice a day, until he had gotten them up to about $\frac{1}{8}$ of a grain twice a day. He got stimulation of heart from it, and had never poisoned a patient. These doses were not given hypodermically.

Dr. Haigh wished to render his personal thanks to Dr. Sikes for his speech, advising cautiousness in the use of drugs. Had he been a jury and the man brought before him, he would have found him guilty of murder. There has been no better suggestion made at this meeting than that they should be careful in giving these potent drugs.

Dr. Kent was glad of this discussion. He had used nitrate of strychnine, and could honestly say that no man in the audience had been more cautious in his administration of it; if he had ever erred it was because of fear of giving beyond what he thought was safe. He had never given in the beginning more than $\frac{1}{20}$ of a grain. Sometimes he gave $\frac{1}{16}$, but the safe way is to give little except in the extremest cases, where the life of the patient is ebbing away quickly, then they are warranted in using heroic doses. Where there is time for small doses, give them, by all means; it is a valuable remedy. Dr. Mays suggests $\frac{1}{20}$ of a grain to begin with; I suggest $\frac{1}{60}$, and give that as you see necessity for it; or, in extreme cases, begin with $\frac{1}{20}$ of a grain and repeat that if you see no effect.

PROFESSOR LABADIE-LAGRAVE has used antipyrin successfully in the treatment of certain uterine hemorrhages. It is difficult to introduce powdered antipyrin into the uterine cavity, so it occurred to him to use antipyrin liquified with salol, thus producing a medicament at once hemostatic and antiseptic. The following is the mode of procedure: Equal parts of antipyrin and salol are placed in a test tube so as to occupy about one-third the space; they are then heated over an alcohol lamp, when the mixture is soon transformed into a clear liquid with a slightly brownish tinge. This is not the time to use the solution, for it will solidify too rapidly. The heating is continued until a well-defined brown color is noticed, when there is no longer any danger of its rapid solidification. The liquid is introduced by means of cotton soaked in it and rolled on a wooden applicator; after seeing that the liquid is not too hot, the application is made through the speculum. If the hemorrhage is excessive, two applications are made at the same sitting, after which a tampon, soaked in glycerated creosote, is placed in the vagina and the patient sent to bed. The applications are free from danger and occasion no pain. Their hemostatic action is rapid, sure and complete; the hemorrhage is quickly stopped and by the second day there is no trace of hemorrhage; it is rare that the application needs to be repeated. The method is efficacious against hemorrhages due to fungous metritis, to misplacements, fibromyomata and also to malignant tumors in the beginning, when the hemorrhage is due more to congestion than to ulceration.—*Maryland Med. Jour.*

The latest remedy for the vomiting of pregnancy is a twenty per cent. solution of menthol in olive oil. The dose is ten drops on sugar when the nausea appears.—*Ex.*

AN OBSTETRIC RESOURCE AND NECESSITY.

By J. R. Irwin, M.D., Charlotte, N. C.

In 1893 I contributed an article to *The Charlotte Medical Journal*, on rectal injections in obstetrical cases, and, after a still more extended use of them, am more convinced than ever of their utility and necessity in such cases.

While parturition is a natural process, yet, in civilized life, the woman needs some assistance, and every attention that will contribute to her comfort, facilitate labor and assist to effect the safe conduct of the paturient woman, is one of the great objects of medical practice and the obstetric art. And although labor is a natural process, it is safe to regard every parturient woman exposed to dangers and complications which may imperil her safety.

From the casual way in which enemata are recommended by authors and writers on obstetrical matters, only suggesting their employment "in case the bowels have not acted," we would naturally infer that they are of little consequence. And if the practitioner relies upon what the patient says in regard to condition of her bowels, he will rarely meet with an indication for their use, for she almost invariably says that her bowels have acted previous to or since the beginning of labor. Perhaps this may be correct, but few women escape during the last weeks of pregnancy from an accumulation of fecal matter, which, in some instances, is enormous in quantity, and what they call regular action may be associated with very imperfect removal of the contents of the bowels. Therefore most women need them to relieve this condition, and rectal injections should be one of a series of attentions that the physician should give his patient. By so doing he not only relieves a slight mechanical impediment to the process of labor, but he thus prevents the involuntary defecation that so often takes place with the last expulsive pains, to the mortification of the patient and utter disgust of the attending physician.

Another advantage to be secured by a thorough evacuation of the contents of the bowels is, wounds of the fourchette or slight perineal lacerations are not contaminated with fecal matter, and subsequent infection from this source is thus avoided. Recently I read an account in one of the medical journals of a case of peritonitis, which began as an endometritis, caused by the presence of the bacterium coli commune, the inflammation extending through the intermuscular connective tissue of the uterus to the parametric tissue, and thence to the peritoneum. Hence another indication for the thorough evacuation and cleansing of the bowel. Of course the genitalia should be bathed with an antiseptic solution after each movement from the bowels.

There is one point that should be emphasized. When a woman passes through the act of parturition with accumulations in her bowels and enters the puerperal state with a distended intestinal canal, the bowels continue sluggish. In some instances I have no doubt that the retained feces produce an intestinal irritation which may be continued to the serous coat and may assume the proportions of peritoneal irritation, and even that of acute peritonitis.

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*Read before the North Carolina Medical Society, May 15, 1895.

Perhaps you all have noticed the tardiness with which even slight wounds heal, if the excretory processes are not going on freely. A mere scratch, abrasion or sore will be several days healing under such circumstances, and because of an altered state of the blood, consequent upon constipation, and it is a well-known fact that constipation may derange some of the most important organic actions. The circulation of azotized matter, nitrogenous waste, excretory substances, which hepatic and intestinal activity should eliminate, makes the earlier steps of digestion impossible. Improvement after purgatives illustrates the dependence of all the functional activities of the body on the prompt removal of accumulated excretory matter. These patients, if not already suffering from indigestion, are in a condition to suffer from its effects, and indigestion does not mean alone the defects in gastric and intestinal reduction of food, but also the perversions of absorption, assimilation and excretion, with the morbid states they create, and are causes of not only functional disorders, but secondary pathological changes in various parts of the body. And the toxines of the blood may render the uterus and appendages more vulnerable to germs which may be present, and as there is congestion of all the parts concerned in labor, the tissues are rendered more susceptible to any germs present.

Bacteriologists have discovered that normal blood is antagonistic to germ life, and is the sentinel, constantly on the alert to guard the citadel of life. Impoverished blood, which lacks some of its normal elements, or is surcharged with abnormal or foreign ones, furnishes a favorable nidus or culture-ground for the development of disease germs. Many of the ailments of childhood are due solely to imperfect action of the bowels, which we often see completely relieved by the administration and action of a purgative. And gynecologists tell us that coprostasis may give rise to pelvic troubles, such as metrorrhagia, dysmenorrhœa, etc. And in everday practice we see cases of constipation, where the liver has become clogged with the effete products of metabolism, and the retained nitrogenized material perhaps causing a rise of temperature, and other symptoms. Whether this is true or not from a pathological standpoint, it is certain that treatment based on this reasoning is often gratifying in the highest degree.

All obstetricians advise attention to the intestinal functions immediately after delivery, which is well, but thorough evacuation beforehand is better. In all operations of selection surgeons advise that the bowels be opened by purgatives or enemata as preparatory treatment. Thus we see the importance of attention to the condition of the bowels at this time, and if a physician is engaged to attend a case of labor he should give minute instructions in regard to this matter, so as to avoid constipation, and he should not fail also to administer a rectal injection after being called to the case.

What has been said, so far, relates to the employment of rectal injections to aid in securing the best possible condition in which the woman should pass into the puerperium. There is another use for which I wish to recommend them, and which, so far as I know, has never been suggested except by me, to accelerate and increase the expulsive character of the uterine contractions, render them more efficient, and thus expedite the delivery of the child.

Women, especially primipara, at the beginning of the second stage of labor, frequently hesitate to exert abdominal contraction, fearing that this will increase their suffering. This acessory force of the pains, the abdominal pressure, which acts upon the progress and expulsion of the child, may be regulated by the will, and in the effort to evacuate the bowels sets in voluntarily. In such cases a most excellent effect was observed after the injections, the ecbolic action showing itself in from twenty to thirty minutes, and nearly always lasting until the birth of the child; the contractions being regular, strong and free from any tetanic tendency. Sometimes spasmodic contractions of the external os, where the upper part of the uterus has not manifested power enough to overcome the resistance, the injections increase this power, the so-called spasm ceases and the os opens. Very often, prior to complete dilatation of the mouth of the womb, feeble contractions are observed, before or after the rupture of the membranes, and this defective uterine action may have characterized the labor from the beginning, or after hours of unproductive uterine action.

So that, besides the indirect action in labor of the abdominal muscles and the diaphragm, brought about by the use of injections, the direct action of the uterus is increased and its expulsive efforts made more efficient. This action is due to a reflex irritation of the terminal nerves of the bowel, which is communicated to the connecting fibres of the ganglionic or spinal nerves, and thus conveyed to the uterus, it contracts reflexly.

Frankenhauser says stimulation of the hypogastric plexus causes contraction of the uterus. The fibres arise from the spinal cord, from the last dorsal and upper three or four lumbar nerves, run into the sympathetic and then reach the hypogastric plexus.

Basch and Hoffman say that stimulation of the sacral and lumbar parts of the cord causes powerful uterine movement. As the parturition centre and the centre (Budge's) controlling the act of defacation are situated in the same part of the cord, in close proximity, and during labor the reflex activity of the spinal cord undergoes augmentation and the irritability of the uterus is increased, it is not unreasonable to suppose that rectal injections of a saline solution may stimulate uterine action. Laying aside theories in regard to the matter, and after an extended use of them and observation of their action, I am convinced that it is a clinical fact.

Another advantage and use: In exceptional and occasional cases of postpartum hemorrhage transfusion of saline solutions are practiced to aid in a mechanical way and even to excite the circulation. By the administration of rectal injections of a saline solution this necesslty, if not prevented, is anticipated. Because a considerable amount of it is absorbed, as is evidenced by the thirst experienced, and this, together with the fluid imbibed, fulfills the indications for transfusion.

In regard to the method of administering rectal injections very little need be said, for most of the gentlemen present are familiar with the procedure. The solution I have been accustomed to use, as stated in the outset, is chloride of sodium (common salt) from one to two ounces to the quart of water. The temperature of the water should be about 98° to 100°. Though I have had splendid results from cold water, the warm water is usually more acceptable to the patient.

Place warm rubber sheet under the patient to protect the bed, and put her on the left side with the knees flexed. It is necessary that the fluid be introduced slowly, the operator stopping for a time whenever the patient feels contraction coming on, and a cloth should be pressed against the rectum to assist in retaining the water. If the bowel is only gradually distended, two pints or more may be introduced before reflex action is excited. During this contraction the water is prevented from passing off by the voluntary efforts of the woman, together with the descent and impinging of the womb against the rectum, and then travels in an upward direction, that is, antiperistalsis is brought about, which empties the rectum and fills the colon. As soon as the pain passes off the injecting process is resumed until the return of another pain. Often a considerable amount of water may thus be injected, insuring a thorough evacuation of not only the rectum, but entire colon, together with the stimulating effect upon uterine action by sympathetic reflex action.

When labor is too far advanced to permit the woman to use the commode, the bed-pan can be placed under her. To sum up:

1. Rectal injections are indicated in labor to remove a mechanical obstacle to the progress of labor.
2. To prevent absorption of excretory matters into the blood.
3. To prevent local contamination of fecal matter and germs.
4. To anticipate the necessity for transfusion of salines in case of hemorrhage.
5. They may be used as a co-efficient in increasing uterine action and acceleratiug delivery.

In conclusion, if any apology is necessary to the members of this Society for calling their attention to this subject, and if rectal injectious in labor are regarded of minor importance, let me remind you that "He that is faithful in that which is least, is faithful in that also which is much."

Society Reports.

RICHMOND ACADEMY OF MEDICINE AND SURGERY.

Regular meeting, Dr. Wm. S. Gordon, President, in the Chair.

Dr. James W. Henson read a paper on the History of Cholelithiasis and the Anatomy Relating to that Disease. Among other things, he drew attention to the size of the cystic, hepatic and common bile ducts in their various parts, to the size of the opening on the papilla and to the relation of the duct, artery and vein in the transverse fissure of the liver. He stated that there were few muscular fibres in the coat of the gall bladder, and these did not have much power.

DISCUSSION.

Dr. H. H. Levy said from all he could gather he was very much under the impression that the muscular elements of the gall bladder and ducts were very important, and if so, they must exist to some extent.

Dr. Hugh M. Taylor: In connection with the anatomy of the gall bladder there are two important facts of which no mention has been made:

1. The rich system of lymphatics which, in certain conditions, will aid the diffusion of septic matter.

2. The rugæ of the mucosa, which predisposes to inspissation of the bile and formation of stone.

Dr. H. H. Levy read a paper on the Physiology of the Bile and Gall Bladder and the Etiology of Cholelithiasis. The color of the bile varies, as does its consistency. When fresh it is slightly viscid, due to the mucus of the bladder and ducts. Normally, it is of a neutral reaction, but may be alkaline, or even acid. The important constituents are:

1. Mucus, prone to decompose and cause alterations in the chemical constitution of the bile.

2. Bile salts, taurocholate and glycocholate of sodium.

3. Pigments, the chief being bilirubin and biliverdin, the former often occurring in combination with alkalies. It is similar to hæmatoidin.

4. Cholesterin in small amounts, characterized by being lævo-rotatory and occurring in rhombic plates that seem to have one corner broken off.

5. Diastasic ferment.

6. Traces of urea.

7. Inorganic constituents: salts as found in most other secretions and a considerable amount of CO_2 in fresh bile, either free or in combination.

The small amount of chloresterin is noteworthy.

The secretion is not a mere filtration, but a product of the liver cells, always going on, greater at times than at others. It does not pass immediately into the intestine when digestion is not taking place, but regurgitates to the gall bladder, where it is kept until needed.

The quantity secreted in twenty-four hours is about 1–14000 of the body weight; and the period of greatest flow into the intestine is about three or four hours after the ingestion of food. Circumstances influencing secretion are as follows:

1. Food—nitrogenous increases it more than vegetable, while fatty foods have no effect.

2. Water in large amount increases the quantity, but lowers the specific gravity.

3. Other things equal, an increased blood supply increases the quantity, and *vice versa.*

4. Any condition increasing disintegration of the red corpuscles, increases the quantity of bile.

The flow is influenced by—

1. The vis-a-tergo.

2. Descent of the diaphragm pressing on the liver and in inspiration. Negative pressure produced by inspiration also aids it.

3. Contraction of the muscular fibres of the bladder and ducts.

4. Stimulation of the cord as by passage of food into the stomach and duodenum. In this connection a practical point to note is, a small amount of resistance to overflow is sufficient to cause stagnation of the bile.

Disposal of the Bile.—The water aids the maintenance of the softness of the fæces. Mucus passes out unchanged. The pigments do not appear in their own forms in the secretions, but as hydrobilirubin, urobilin and stercobilin. The meconium of the fœtus contains the pigments unchanged. The bile salts are mainly reabsorbed. Cholesterin and lecithin are formed in the fæces.

Composition of Gall Stones.—Cholesterin constitutes, by far, the greatest number, but all do not contain it, and often it is mixed with fatty or saponaceous matters or pigments. Some are composed of bilirubin (mostly in combination with calcium), in strata or masses of cholesterin. Hydrobilirubin may alone form them, as also may glycocholate and taurocholate of calcium. Many are made up of fatty acids and soaps. Mucus and epithelium occasionally constitute small stones or the nuclei of larger ones. Sometimes they are formed of the oxides of the heavy metals with occasionally nuclei of globules of mercury, and sometimes there is a chalk stone of the earthy carbonates. The nucleus is mostly composed of a little mucus from the gall bladder. The physical characters are varied, some being white, simple and homogeneous; but more commonly they are mixed either in radiations from the nucleus or in concentric rings around it. The crust is nearly always of pure cholesterin, but sometimes it is formed of fatty acids, coloring matter and cholesterin.

Etiology.—The oldest supposable cause for the formation of gall stone is inspissation, but it is rare to find all the constituents of the bile, except water, in a single stone. Other theories are, lessened secretion of sodium, action of an acid, increased amount of lime, forming with the pigments a nucleus, secretion of calcium from the mucous membrane of the gall bladder. All stones, however, do not contain all these substances. Formation is chiefly due to the precipitation of some one substance, and this does not occur until glycocholate or taurocholate of sodium decomposes, when the reaction is changed to acid.

In order that the concretions should be of any size, it is necessary for the bile to be retained in the gall bladder or ducts for some time. Sometimes erosions are found in the stones, caused occasionally by depositions; sometimes they divide, and these conditions make their disposal much easier of accomplishment.

The influence of age on the formation of biliary calculi is difficult to understand, unless it be due to the habits and changes age brings. They are most common over 25 years. Females are more prone than males, three to two. Multiparity predisposes, as do diseased conditions anywhere; morbid changes in the liver and its passages, cancer, adhesions to various organs. Another cause is sedentary habits. Too long intervals between meals favors stagnation. It is doubtful if there exists a diathesis predisposing to stone.

DISCUSSION.

Dr. Taylor quoted Murphy, of Chicago, who says the gall bladder plays an insignificant part in the storage of bile. If this is not so, removal should be attended by disastrous results upon the system. In fact, it is not. It is always found filled with bile whose specific gravity varies from that of the liver. It subserves the purpose, says Murphy, of controlling the discharge—making it continuous—by keeping up tension like the second bulb of an atomizer. A puncture of the gall bladder does not contract, and the bile continues to flow from it, demonstrating the absence or insufficiency of the muscular fibres.

Dr. Landon B. Edwards contended that if the bladder acts as a second bulb, it must do so continuously, causing it to empty itself eventually. Then if a puncture allows the continuous escape of bile, where can it come from ? The bladder may act as the first bulb, but to his mind, the second bulb idea is erroneous.

Mark W. Peyser, M.D., Secretary and Reporter.

NORTH CAROLINA MEDICAL JOURNAL.

ROBERT D. JEWETT, M.D., EDITOR.

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This JOURNAL is published on the fifth and twentieth of each month, and any subscriber failing to receive his copy promptly, is asked to announce the fact to this office.

Cuts will be provided for any original communications (sent to this JOURNAL only) requiring illustrations, free of cost to the author.

Secretaries of County Medical Societies in the Carolinas are asked to furnish condensed reports of their meetings to the JOURNAL.

All communications, either of a literary or business nature, should be addressed to, and remittances made by P, O. Order, Draft or Registered Letter, payabel to ROBERT D. JEWETT, M.D., P. O. Drawer 810, Wilmington, N. C.

Editorial.

PRECISION IN WRITING AND FILLING PRESCRIPTIONS.

All physicians in writing and all druggists in compounding prescriptions should keep constantly in mind the importance of being exact, even in the smallest particular. We have seen prescriptions so illegibly written that it was impossible for any one but the writer to more than guess at what was desired. It is a physician's duty to take sufficient time and care in writing a prescription that the druggist can make no mistake. No matter how simple the prescription, the same care should be exercised, for otherwise the druggist may dispense some potent drug which may seriously retard the patient's recovery or even endanger his life. Writing a prescription while carrying on a conversation with some one who desires to learn as much as possible of the patient's condition, or by insufficient light to enable one to see a word after it has been written should be avoided.

The physician having written his prescription plainly and carefully, and having checked it over to see that ingredients and doses are all right, it is the druggist's duty to go over it and see that no unusually large doses of any potent remedy have been prescribed without some indication from the writer of the prescription that the dose was intentionally ordered. Satisfied that he understands the writer's wishes thoroughly, he should give his undivided attention to the compounding of the prescription, and not attempt to carry on a conversation with some friend who happens to be loitering in the store, or stop to sell a glass of soda-water or a cigar. The prescription is more important than the mere amount of money he receives for it. It has to do with the patient's life and is a high trust that should be appreciated and faithfully carried out. The smallest details should be followed, for it is not the druggist's place to know whether "this is all the same and will do as well."

We have recently seen an instance where a failure to comply with what the druggist thought a small matter, came near resulting very seriously for the patient.

The patient was in the latter part of the second week of an attack of typhoid fever. Colored tablets of bichloride were prescribed to be used as a disinfectant. The druggist dispensed white tablets, using care, however, to mark the bottle "poison." The attendants were highly intelligent and very careful in carrying out instructions. A bottle of the bichloride solution was made and labeled and kept on the back piazza, while the water for the patient to drink was kept on the front piazza to be more sure of avoiding an accident. However, an unintelligent servant, seeing the water-pitcher empty, and supposing the bichloride solution to be the boiled water used for the patient, filled the pitcher with the solution. Some whiskey was administered, well diluted with the solution (which was especially strong) and a draught of the solution given afterward. The patient soon complained of the metallic taste and in a few minutes vomited. He was taking egg albumen as a part of his nourishment, and the time being near for its administration, by the fortunate suggestion of one of the attendants it was immediately given. Upon our arrival more albumen was administered and the patient had no further trouble. The amount of bichloride ingested must have been at least a grain.

Had the druggist followed the the directions and dispensed colored tablets, the accident would not have occurred.

Reviews and Book Notices.

Index of Medicine. A Manual for the Use of Senior Students and Others. By Seymour Taylor, M.D.. Member of the Royal College of Physicians; Senior Assistant Physician to the West London Hospital. Cloth, octavo, 794 pp. Lea Bros. & Co. Philadelphia, 1894.

This volume was commenced with the view of making it a companion to Keetley's "Index of Surgery," but such an arrangement involved so many cross-references that it was deemed better to follow the more acceptable grouping by anatomical and physiological relationship, and hence, after a discussion of General Pathology, General Diseases and

Specific Fevers, we find such groups as diseases of the digestive organs; of the respiratory system; of the vascular system; of the ductless glands; of the urinary system; of the nervous system.

The description of each disease must needs be brief in a work which is more of a compendium than a textbook, and intended chiefly, as the title shows, for the use of senior students preparing for their final examinations. The author has depended, for the most part, upon notes from the lectures of Drs. Peacock, Murchison, Bristowe, Ord and Smith-Shand.

Abstracts.

The Treatment of Chlorosis (*Du Traitement de la Chlorose*). Potain (*Jour. de Medecine de Paris*, April 14, 1895).—The author mentions several varieties of the above affection, dealing first with that form of chlorosis in which the circulatory system appears to be affected, while lesions of organs are rarely present. For this malady various stimulating remedies are indicated, as saline baths and friction, assisted by moderate physical exercise. On the other hand, intellectual work must practically be forbidden. All excitement must be avoided, even marriage not always proving beneficial. Foods should be selected not only with regard to the amount of iron they contain, but also on account of the phosphorus present in them. The author, however, wishes to exclude from the present malady those individuals in whom a waste or loss of phosphates only is responsible for the symptoms. Foods rich in phosphates are milk, eggs, haricots, lentils, etc., though their proper assimilation by the stomach is frequently difficult. On the other hand, various vegetable products have been recommended, and the author states that the diet-drink prescribed by Hippocrates and physicians before him was merely a decoction of barley, a most valuable bone-producer. During most recent times Robin has advocated glycero-phosphates, but no sufficient results have as yet been obtained from their use. Iron also, of course, requires to be given in the form of a drug. Cases in which palpitation is the prominent symptom are then dealt with. Where digitalis may be beneficial, neutral, or even injurious, nerve sedatives, such as bromide of sodium, valerian, or camphor, are likely to produce good results. The author next passes on to what he terms cases of dyspeptic chlorosis. This dyspepsia may be primary, requiring careful dieting and the use of bitters, or secondary, when varieties, such as the painful, mucus, atonic, etc., may be distinguished. The first form, owing to the sensitiveness of the stomach, presents the greatest difficulties in treatment, and therefore the most soluble preparations, or ferruginous waters, must be administered. In extreme cases recourse may even be had to subcutaneous injections of iron; but the results achieved in this respect with defibrinated blood have not been proved more successful. Where the dyspepsia is atonic alkalies may do harm; alcohol should be avoided, and good results may follow the inhalation of oxygen. Neuropathic chlorosis follows, and is subdivided into the atonic and the excitable forms. For the former patients, gymnastics, change of scene, etc.; for the latter, complete rest, sometimes in bed, are advocated. Hydrotherapeutic remedies may also prove beneficial to the latter patients. Difficulties are present in cases dependent upon self-administered drugs, malaria, syphilis and pregnancy. Tuberculosis also may be coexisting or only threatening, in view of an inherited disposition. For the latter patients, arsenic and manganese waters are recommended; for the former, iron. Finally, the author deals with patients also suffering from cardiac affections. When the aortic valves are affected, it must be remembered that chlorosis, though a troublesome complication, does not aggravate the malady. Mitral regurgitation, on the other hand, tends to be exaggerated by a chlorotic condition. In these cases iron not only augments the number of red corpuscles, but, as observed by the author, will lead to a greater capillary resistance, and consequently an improved circulation will result.—*Practitioner.*

SOME REMARKS ON ARTIFICIAL MINERAL WATERS AND SALINE MIXTURES (*Einige Bemerkungen ueber kuenstliche Mineralwaesser und Salzinischungen.*)—O. Leibreich (*Prager medizinische Wochenschrift*, No. 23, 1895.)—The author states that years ago he called attention to the circumstance that a difference must exist between the actions of natural and manufactured mineral waters. Liebreich continues that, whereas chemists are now able synthetically to construct various organic compounds, organic mixtures are more difficult to reproduce, as their various constituents are probably not always known. As an example, reference is made to the ash of marine plants, which, during the past century, was in demand for scrofulous and other affections. Subsequently, with the application of chemical tests, soda was believed to be the principal and only constituent, and, when used in place of the ash, was not found to have the same therapeutic value. Only during later years iodine was discovered to be another and the more important constituent. Similarly, until recently a chemist would have reproduced air without being able to add the newly-discovered argon. In the analysis of many mineral waters the quantitative test has often been unable to account for the total bulk present. In some mineral waters substances such as fluoric and formic acid have been discovered in minute quantities whose therapeutic properties, when administered during long periods, we are unacquainted with. Lepine first remarked that some drugs when combined in minute doses are as efficacious as a single one administered in the usual quantity. Similarly, a special virtue may exist in mineral waters, though many constituents are so sparingly represented. Nevertheless, a large field remains for the reproduction of mineral waters; but, in the author's opinion, it is necessary to check the opinion gaining ground with many that we are already able to supplant our mineral waters by means of artificial productions.—*Ibid.*

PUERPERAL INSANITY.—Dr. Dagonet (*Progres Medical*, April 7, 1894).—The puerperal condition, properly speaking, refers only to the functional and organic modifications which take place in women during and after parturition, before the return of the menses, or the physiological establishment of lactation. But from the point of view of puerperal insanity this period may be divided into three periods: (1) gestation; (2) puerperal condition proper; (3) lactation.

The following statistics show the relative frequeucy of psychosis in each of these periods: gestation, 3.1 in 100; puerperal condition proper, 9.2 in 100; lactation, 3.6 in 100. According to Marce, insanity caused by pregnancy generally develops about the end of the fourth month, and increases progressively. Melancholia is the most frequent form. Schmidt gives the following proportions: 52.9 in 100, melancholia; 31.3 in 100, mania; 10.3 in 100, systematized delirium; 5.8 in 100, general paralytic dementia. Marce observes that labor seldom relieves this form of mental disease; on the contrary, the symptoms are generally aggravated, and melancholia often assumes the form of more or less violent mania. Abortion, sometimes recommended as a curative measure, should be strictly forbidden. Gestation, with these patients, is usually normal, and abortion seldom occurs spontaneously. The opinion advanced by some authors that pregnancy exerts a beneficial influence upon the insanity already established, is not sustained by statistics. Esquirol believes that marriage and labor generally stimulate the disease. When psychosis appears at an early period prognosis is more favorable than when it occurs towards the end of gestation, but it generally persists for several months, and relapses may be expected in subsequent pregnancies. The causes of puerperal insanity proper, that is, insanity which develops during the period following labor before the organs of generation have resumed their normal functions, are divided by Campbell-Clark into predisposing causes and producing causes. In the first category, hereditary predisposition is the most important, as it exists in 56 p. c. of these cases. The complicated influences affecting a first pregnancy are next in order. Nearly half the patients suffering from this form of psychosis are primiparæ. Among producing causes infection occupies the first rank, infection of the uterus or of other organs. Campbell-Clark reports 70 of 100 cases caused by infection; 66 by infection of the uterus, 4 of the kidneys. More than half these patients were under the influence of intense moral emotions; and we realize the importance of this influence when we consider the large number of women who suffer from puerperal infection. Dr. Idanof gives the proportion as 8 or 9 p. c., and the comparative variety of puerperal insanity. The disease usually appears about the fourth or fifth day. Irritability, insomnia, headache, agitation, diminished secretion of milk, are premonitory symptoms. Fever may or may not be present, but the head is always hot. Sometimes the disease assumes a fatal form, when the tongue becomes dry and furred, the secretions cease abruptly, and the patient falls into a comatose state, which soon ends in death. Puerperal insanity proper assumes the most diverse forms: mania in 47.8 p. c.; melancholia in 37.9 p. c.; systematized delirium in 5.8 p. c.; acute dementia in 5.5 p. c. Prognosis is favorable in most cases, more favorable in mania than in melancholia. Patients suffering from insanity after prolonged lactation usually present symptoms of extreme exhaustion. Prognosis is not unfavorable, but more grave than in puerperal insanity proper. Therapeutic indications are the same in all kinds of puerperal insanity. Treatment consists in the removal of all exciting causes, a tonic regime, mild purgatives, injections of chloral hydrate, and other soothing influences. —*Univ. Med. Mag.*

THE FINAL RESULTS IN RADICAL OPERATIONS FOR REDUCIBLE HERNIÆ. —Beresowsky (*Deut. Zeitschr. für Chir.*), after studying the various methods and describing the one he now favors, concludes his valuable study with the following summary:

1. The indications for operation which during the past year (1892–93) have been held in the Berne Clinic, are confirmed by the last 220 operations. The wish of the patient may be considered a sufficient indication, since the mortality is nil and the percentage of relapses is very slight.

2. The size and the age of the herniæ have an influence on the period of recovery, and in most cases with regard also to recurrence.

3. The age of the patient, i. e., the laxness of the abdominal walls, influences in no manner the result of the operation or the rapidity of the healing; it has a slightly greater influence upon the prognosis as regards recurrence. In case of operation for inguinal hernia under the above conditions a relapse of the original hernia is not so frequently observed as a return in some other locality which has no relation to the former area, and is apparently due entirely to the relaxation of the abdominal parietes.

4. Thanks to the good course of the operation and wounds, the operation for oblique inguinal hernia can be performed upon children at an early age.

5. The best method for performing the radical cure for oblique inguinal hernia, the author considers, is the last manifestation of Kocher's method, since, in the first place, it produces not less certain results, as far as recurrence is concerned, than the already best known methods (Macewen, Bassini); and, secondly, since this method, on account of the simplicity of its technique and the harmlessness to the patient; if there should be any

accident in the process of healing, has decided advantages.

6. In order to prevent recurrences it is very necessary during the operation to observe the condition of the spermatic veins, and in case a varicocele is ever produced, it should be operated upon as speedily and thoroughly as possible.

7. The wearing of a truss after a properly performed operation, followed by primary union, is entirely unnecessary, since the majority of the patients, laborers, sent out from the clinic remain free from relapse without wearing any form of truss or protection over the wound.—*American Jour. Med. Sci.*

OFFICIAL LIST OF CHANGES IN THE PUBLIC SERVICE.

THE ARMY.

From July 25th, 1895, to August 7th, 1895.

Woodruff, Major Ezra, Surgeon, is granted leave of absence for one month—Fort Keogh, Montana.

Lippitt, 1st Lieut. Wm. F., Jr., Assistant Surgeon, is granted leave of absence for two months—Fort Leavenworth, Kan.

Winne, Major C. K., Surgeon, U. S. A. The leave of absence for seven days granted Major C. K. Winne, Surgeon, U. S. A., is hereby extended twenty-three days.

Carter, Capt. W. Fitzhugh, Assistant Surgeon U. S. A., is granted leave of absence for one month.

Powell, Capt. Junius L., Assistant Surgeon, U. S. A., is granted leave of absence for one month, with permission to apply for an extension of one month.

Porter, 1st Lieut. Alex. S., Assistant Surgeon, U. S. A. The extension of leave of absence, on account of sickness, granted 1st Lieutenant Alexander S. Porter, Assistant Surgeon, U. S. A., is further extended two months.

THE NAVY.

For the week ending August 10th, 1895.

Aug. 6.—Surgeon C. G. Herndon, detached from Bureau of Medicine and Surgery to duty on the "Lancaster." P. A. Surgeon, P. C. Brathwaite, detached from Naval Hospital, Norfolk, Va., to duty on the "Lancaster."

Aug. 7.—P. A. Surgeon, E. R. Stitt, detached from special duty and ordered to the "New York." P. A. Surgeon, J. F. Urie, detached from the "New York" and granted two month's leave.

Aug. 9.—P. A. Surgeon, I. W. Kite, detached from the Monitors to duty on the "Franklin."

P. A. Surgeon, L. L. Young detached from the "Franklin" to duty at Naval Hospital, Norfolk, Va.

Abscess of the Nasal Septum.—Dr. Joseph S. Gibb (*Codex Medicus Philadelphiæ*, February, 1895) reports two cases of septal abscess, one acute and the other chronic, in which some injury was believed to be the exciting cause, although there was no such history. These are the only two cases seen at the Episcopal Hospital out of 2,000 cases of nasal disease.—*Ex.*

Miscellaneous Items.

Under this head space will be given (free of cost) to those paid-up subscribers who desire to change their location, or to dispose of practice or property. One insertion will be allowed, but inquiries must not be ordered addressed to this office.

Any news connected with professional men and matters in North and South Carolina will be appreciated by the Editor.

We note the removal of Dr. G. J. Atkins from High Point to Jackson Hill, N. C.

It is with much sorrow we announce the death of Mrs. Dr. Richard H. Lewis, of Raleigh, N. C.

The twenty-sixth annual session of the Medical Society of Virginia will be convened in Wytheville, Septem-3d, 1895. Dr. Landon B. Edwards, Secretary, Richmond, Va.

There is a serious break-out of small-pox at Eagle Pass, Texas. The camp is in charge of the State health authorities, with the assistance of the U. S. Marine Hospital Service.

The following is the health report of Wilmington for July, 1895:

	Whites.	Col.	Total.
Population	9,000	13,000	22,000
Total deaths	17	31	48
Annual death rate represented	22.7	28.6	26.1

The seventh annual meeting of the Tri-State Medical Society of Alabama, Georgia and Tennessee, will be held in Chattanooga, Tuesday, Wednesday and Thursday, October 8, 9, and 10.

The American Electro-Therapeutic Association will hold its fifth annual meeting at the College of Physicians and Surgeons of Ontario," in Toronto, Canada, on Tuesday, Wednesday and Thursday, September 3d, 4th and 5th, 1895.

The Board of Medical Examiners of North Carolina will hold its summer session at Wrightsville, beginning August 26th.

The Trustees of the William F. Jenks Memorial Fund announce that the William F. Jenks memorial prize of five hundred dollars, under the deed of trust of Mrs. William F. Jenks, has been awarded to Dr. A. Brothers, 162 Madison Street, New York, for the best essay on "Infant Mortality During Labor. and Its Prevention."

The Prize Committee also reports as highly meritorious the essay on the same subject bearing the motto, "Vade Mecum."

The writers of the unsuccessful essays can have them returned to any address they may name, by sending it and the motto which distinguished the essay to the Chairman of the Prize Committee, Horace Y. Evans, M.D., College of Physicians, Philadelphia, Pa.

ARTIFICIAL CAFFEIN.—Another triumph for the laboratory has just been recorded in the synthetic manufacture of caffein. This is an important advance, not only in itself, but also in the suggestion of future progress.

The process requires as yet such an elaborate series of chemic operations as to make the cost of the product considerably above that of natural caffein. But only a mere simplification of the process is required to remedy this, and that is sure to come with perseverance and practice. This field has been a most tempting but barren one to the chemist for generations past. For a long time it seemed absolutely hopeless to attempt to rival protoplasm in its transforming and constructive powers. When at last the synthesis of urea was achieved, some fifteen years ago, it was hailed as a great triumph. Slowly but painfully one product after another has been achieved, but so far these have been the results of excretory metabolism. A few months ago, however, the formation from inorganic materials of something seemingly identical with albumin was announced, and now such a complex and active body as caffein has been reached. No less authority than M. Bertillon is most sanguine about the prospect, and declares that it is only a question of time—and a short time at that—when we shall be able to construct all of our food-materials directly out of the elements without the aid of either plant or animal.—*Medical News.*

Reading Notices.

For a number of years it was our privilege to be able to give almost exclusive attention to the study of physiology. Nothing can be more fascinating either to pupil or teacher. During all this time, and even up to the present day, we had to believe that "The principal object of the saliva is to moisten the food, and thus aid mastication and deglutition." And yet we had to face the fact that an enormous quantity of saliva was secreted every twenty-four hours. It appeared almost like a waste of the forces of nature. We had to believe that the moment this saliva reached the stomach it became inoperative. But now all this is about to be changed. Although Freirichs came to the conclusion a number of years ago that salivary digestion continued in the stomach, yet his work was practically lost sight of. Now, Dr. J. H. Kellogg, of the Battle Creek Sanitarium, has just published the report of some extensive experiments in his Laboratory of Hygiene, on starch digestion. Dr. Kellogg examined the contents of the stomach, after a test meal, in 4,875 cases. In 669 of these cases he found the starch had been completely converted into sugar. Only in 1.8 p. c. of the cases did he find there was little or no conversion of the starch. This certainly must be accepted as conclusive, and hereafter we must teach that the digestion of starch takes place in the stomach by the aid of the saliva ferments. Clinically this will be of great value, and must result in quite a number of changes in our ideas of diet.

It is only within a few weeks that a chemist of Brooklyn, New York, Professor E. H. Bartley, published an article in the New York Medical Journal setting forth the dangers of having digested starch in the stomach. Our readers may recall the fact that a number of years ago a committee on American Chemists were asked to report upon the danger of taking a pre-digested starch into the stomach. Glucose was becoming such a generally distributed article, and was so largely used in the manufacture of confectionery tha this committee was asked to report upon its effects on the system. The report was both exhaustive and conclusive that no deleterious effects would follow its use, even in large quantities. But Professor Bartley has recently taken exception to this report. This is a very important question, for it is a fact that to-day the best candies in the world contain a large amount of glucose; while the most popular beer on the market has recently been shown to contain a larger proportion of glucose than any other brewed in this country.

Professor Bartley speaks against cooked fruits, jellies, preserves and fruit pies; because, he says, the cane-sugar is changed into glucose by heating it with the acid fruits. As is well-known, "prolonged boiling" with an acid is necessary to make this change; while it is a practical fact that the housewife only brings her pears and peaches to a boil. Professor Bartley further declares that the reason why some persons can eat raw apples "without stint and without after-distress," and yet "cannot eat apple pie without distressing after-effects," is because the latter contains this inverted sugar! This is almost ludicrous. It occurs to us there is more difference than this between ripe, raw apples and the average apple pie with its historic crust!

But this article is written with the view of showing how easily any number of theories may be overthrown when all the facts are made known. Professor Bartley says that digested starch is absorbed too quickly while in the stomach, and, therefore, "may prove too great a task on the liver," and "the blood may be overcharged with dextrose." The Professor reasons that when milk-sugar or cane-sugar is taken, it is digested below the stomach, and there more slowly absorbed. The whole drift of his article is to frighten those who take a pre-digested starch, for fear of causing diabetes!

In the light of the recent investigations of Dr. Kellogg, the absurdity of any such view is at once apparent. We now know that nature herself is digesting our starchy foods in the stomach, and that if these digested starches, or if this glucose, could in any way cause diabetes, we would ere this have been a race of diabetics.

For a long time there has been a growing sentiment throughout Germany that diabetes has not been properly treated. Hirschfeld says he believes that diabetic coma is favored by the exclusion of carbohydrates in the diet. Schmitz allows his diabetic patients a small quantity of albumen, while he orders the free use of food containing starch, and fat in large amount. Grube impregnates the system with the carbohydrates. Williamston, of Manchester, says that home-made bread is much better than especially prepared diabetic bread. A number of American physicians are following out this line of treatment with better results than they have had heretofore.

In the light of all this, we must conclude that saliva continues its action on starchy foods in the stomach until nearly, if not all, the starch is chadged into glucose; that glucose is simply a normal product of digestion and no more injurious than a digested proteid; and that the treatment of diabetes is bound to undergo a marked change in the near future. —Editorial in *The National Medical Review.*

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Original Communications.

THE RATIONAL TREATMENT OF PUERPERAL ECLAMPSIA.

BY T. S. MCMULLAN, Hertford, N. C.

The greatest problems perplexing the minds of medical scientists to-day are the etiologies of diseases. In olden times, before the advent of Galen upon the medical field, when the Empiric School, led by Philinus and Serapion and later by Apollonius and Glaucias and Zenxis, pointed out the paths of treatment for maladies, the people, medical and lay, were content to leave alone all theories and to accept experience, and that alone, as the only basis upon which to build a remedial structure. But the day is now, and it has been dawning since Hippocrates uttered his famous aphorism, "Experience is fallacious and judgment difficult," when it is necessary to have a clear conception of the causes of diseases; and the rational physician is one who seeks to find out the occult reason of abnormal conditions and to treat them upon the principles involved in their causation. The old philosophers, too, more subtle than their empiric contemporaries, were soon to learn that medicine was a reasonable art; for Plato, in his Georgias, is heard to say, "And I said of medicine that this is an art which considers the constitution of the patient, and has principles of action and reasons in each case." There are some relics of empiricism in the world yet, but one by one the reasons for the actions of all drugs are being made known, and to-day the term is synonymous with quackery.

The science of medicine has to do with solving the problems of etiology, pathology and symptomatology; but the advances in the science would be of little benefit to mankind if the physician had not found their application in the art; for the treatment and cure of disease is the great endeavor of us all, and to secure the most effective weapons we must, as nearly as we can, have an acquaintance with the enemy.

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*Read before the North Carolina Medical Society, May 15, 1895.

The discussion of the rational treatment of any ailment presupposes a knowledge of its cause or causes. My object is to bring to your attention the treatment for this direful disease, which, to my mind, more nearly than any other, is antagonistic to the operation of the cause. It is not necessary to consume your time in bringing to your mind old and obsolete theories; it is only needful to call your attention to the generally accredited opinion to-day as to its etiology, in as brief a manner as possible, so that you may see that, viewing it as is set forth in this paper, the treatment prescribed is not without its reasonableness.

In 1842 Dr. Lever, of England, made known some observations he had made upon a series of twelve cases, in which he claimed a causal relation between albuminuria and the convulsions of child-bed; since that time this has been accepted as true by almost the entire medical world; one of the earliest and most vigorous opponents being Seyfert, of Prague, seconded by his school, who, because albumen was not always found in the urine of women having eclamptic seizures, and further, because some cases of marked albuminuria were found, which went to delivery with no symptoms of uræmia, denied the doctrine enunciated by Lever, Garrod* and Rees, and refused to believe in the similarity between puerperal and uræmic convulsions, as demonstrated by Braun. But that renal insufficiency, causing a retention of excrementitious matters in the blood, which, by their action upon the vaso-motor centres, by producing arterial spasm, cause an anæmia of the brain, and which anæmia, by increasing the excitability, acts as a stimulant to the convulsive centre in the medulla oblongata, is the cause of puerperal eclampsia, I take it in the light of modern investigation, none of you will deny. For a long time it has been known that in eclampsia the brain is anæmic. How this state is brought about was for a considerable period a vexed question: The old Traube-Rosensteine doctrine, that it was caused by increased arterial pressure, consequent upon the hydræmic state of the blood, has given place to the more modern, more reasonable and more generally accepted views of Dr. McDonald, published in 1878, that the anæmia is caused by, and is due to a spasm of the arterioles, caused by the direct irritation of the vaso-motor centres by the toxines of the excrementitious matters, be they urea or carbonate of ammonia, or whatsoever. Dr. McDonald further held that the great excitability and stimulation of the convulsive centres, the direct cause of the outbreak, were brought about by the anæmic condition of the brain; for it has been shown in the physiological laboratory, by Rausmul and others, that convulsive seizures will be brought on by an artificially produced anæmia of the cerebro-spinal system. Upon this hypothesis, therefore, I shall discuss the treatment. It would not be proper, however, for me to fail to state that occasionally there is seen, at the bedside of laboring women, convulsions of a mild type, which have in them an element of hysteria and which are brought about by reflex stimulation of the convulsive centre, through some irritation at the periphery; "nor would it be reascnable to exclude from the causes of convulsions in the puerperal state causes which might produce convulsions in the non-puerperal state." (Tyson.)

Now, whether this insufficiency of kidney action be due to mechanical obstruction, caused by pressure of the child upon the uterus or upon the renal veins, or whether it be due to some altered state of the blood, or whether to some organic change in the nephritic structure itself, I shall not argue. It only interests us here to know that uræmia does give rise to eclampsia.

With the symptoms and prognosis I shall have nothing to do—the scope of this paper is only to present a treatment in consonace with the propositions laid down as to the causative factors in this altered condition of the human system. Before referring to the remedial measures to be used during the attack, I shall notice in a very cursory manner the care with which every woman should be watched who shows during her pregnancy any evidences of beginning renal inactivity. This part of the subject is, I know, more or less foreign to my aim, my primary object being only to deal with the treatment of the seizures; but it cannot be amiss for all of us to have our minds frequently turned toward the great weight of responsibility thrust upon us, when we assume the care of a pregnant woman, and if, by early and systematic examinations of the urine, whereby we may detect the first evidences of approaching evil, and if, by notice taken of the general appearance of our patient, carefully noting all symptoms, subjective and objective, we can, by the proper use of depletives and sedatives, conduct our frail barque, with its precious freight, into a haven of safety, we can consider that we have attained the highest aim in medicine—the prevention of disease. Nothing in medicine should more command the best talent and endeavor of us all than to try to shield the frailer portion of the human family from this direful calamity. To prevent eclampsia if oftentimes more easy than to cure it, and it has been most aptly said—

> "A little fire is quickly trodden out,
> Which, being suffered, rivers cannot quench."

In noticing the rational treatment of puerperal convulsions, I shall consider first the advisability of bringing about artificial deliveries. To my mind, before the period of viability of the child, there are two courses open to us—after that period one. If, in a given case of convulsive seizures before the seventh month, under judicious treatment the fits were controlled, and by the employment of such remedies as are usual in this condition, and with the proper regulation of the diet, the albuminuria became less, the œdema disappeared and all the symptoms improved, and, with the arterial tension lower and renal secretion more profuse, I should hesitate to bring about a premature birth; for it must be remembered that we have no right, human or divine, to sacrifice the life of an unborn child, unless the condition of the mother imperatively demands it; but if, after the use of sedatives, diuretics, diaphoretics, carthartics, depressants and depletives the œdema become greater, the kidney action less and the cerebral symptoms were all more grave, the pregnancy should be terminated at once. I have not once a doubt but that the removal of the fœtus would be, in every case, more favorable to the woman; but, as before remarked, it is the consideration for the life of the child, and that alone, that should deter us; for, notwithstanding the high mortality rate of infants in these complex labors, some are born alive. After the period at which, ordinarily, a child will live, the time limit of expectant treatment has passed. The *sine qua non*, then, is immediate and rapid delivery. This is my practice, and I want no better warrant for my action than the dictum of modern medical teaching, the first principle of which, in the treatment of any malady, is "the removal of the cause." The foregoing lays down what my views are in regard to this phase of the subject, and what I submit is the opinion of the best obstetric teaching.

The mention of any drug has been omitted heretofore, because I shall prefer taking them up in what this writer believes to be the true order of their importance; for, so far as the actions of drugs are concerned, the *modus operandi* of each is the same in all of the different states mentioned above.

The rational treatment of any disease is that treatment which is based upon a correct interpretation of the pathological conditions met with and which more nearly than any other opposes itself to the abnormal impressions brought about by that condition. So that, in formulating a remarkable treatment of the trouble under consideration, I shall beg of you to subdue for a short while your impatince while I reiterate what, in the light of modern medical teaching, the abnormal conditions found in eclampsia are. We have a deficiency of the functional activity of the kidneys, which causes to be retained in the circulation certain effete products that, in a normally acting body, are cast off. As the result of the direct stimulation of the vaso-motor centres, by the toxins of this excrementitious matter, there is brought about a spasm of the arterioles, causing high arterial and nervous tension and producing, in addition, an anæmic condition of the brain; this anæmia, by greatly increasing the excitability of the convulsive centre, together with the high arterial pressure, is the direct cause of what is known, clinically, as puerperal eclampsia, or, perhaps more scientifically speaking, uræmic convulsions.

Assuming, then, as a fixed fact, the reasons assigned above to be the true causes of this disease, what drug have we that more nearly than any other obtunds the impressions, direct and indirect, made upon their nerve centres by the circulating poisons? The one more nearly than any other answering this description is, I think, morphia, morphia sulphate, administered subcutaneously. Remember that we have to combat the action of the anæmic poison on the vaso-motor centres, stimulating them and causing high arterial tension and consequently anæmia of the convulsive centre, both of which are factors in the production of the seizures. All of us know the characteristic physiological actions of this drug; how it causes congestion of the cerebral structure; how it blinds the sensibility of the sensory cells; its action on the heart and skin. What is the effect, then, of morphia in these cases? We have excited nerve centres—morphia allays excitability; we have causing this irritability anæmia of the brain structure—morphia relieves this state; we have causing this anæmia a spasm of the vaso-motor system, high arterial tension and rapid nervous heart-beat—morphia relaxes the spasm, lowers the arterial pressure and soothes the heart-action. To me, did it only possess diuretic properties (which some, notably the late Professor Loomis, claimed for it) it would seem almost an ideal remedy. And to the reasons given above for its employment should be added its ease of administration and its facility of being rapidly absorbed; I have often thought, in view of the excellent clinical results which I have seen follow its use, that the sulphate of morphia, in addition to its many other valuable properties as a remedy, *par excellence* in this disease, added that of being a direct chemical antidote to the excrementitious products in the circulating blood.

Gentlemen, I am aware that I am advocating a new remedy, but I am warm in its praise because, not only from a theoretical standpoint does it show itself to be the most direct antagonizer of uræmic outbursts which we have, but because in my short experience in the practice of medicine I have seen results follow the use of morphia which refused the sweet solicitation of other remedies. With reference to the dose of this drug to be employed, the only rule is the one formulated in each individual case—only by the most acute observation of the effect of each dose upon the patient can the medical attendant satisfy himself as to the proper amounts to be given. I believe in large doses—not that the beginning be made of large amounts, but at first tentatively, with a keen perception of its power, we increase, if needful, each succeeding dose until warning be given that its further exhibition is useless and dangerous. While prudence would dictate that not more than one-quarter of a grain should be given at the commencement of the fits, I do not think that it would be hazardous to administer *one* grain at one hypodermatic injection, if the recurrence of the convulsions and the general condition of the patient demanded its continued use; for in these cases there is a tolerance for opiates which renders small doses more inert and large doses less effective than in most any other disease; and it must appear that in the irritation of the nerve centres by the uræmic poison there is an analogy to that terrible stimulation of the cerebral cells produced by severe pain; so that, just as in cases where we meet with great agony there is a peculiar tolerance for morphia, just so in uræmic convulsions we find the same marked insusceptibility to its use.

Venesection. — Until thirty or forty years ago, for a physician to visit a case of eclamptic seizures and not use the lancet, would be looked upon as a gross violation of the rules governing medical practice at that day. Later, by about twenty or twenty-five years, it would have been regarded as almost criminal to bleed. The rebound was too great, and no doubt but that as many lives have been sacrificed by its non-employment as were ever victims of the too vigorous use of the knife. Fifteen years since Dr. Barker plead for its restoration—not advocating its employment in all cases; but when he found a patient with *very* high arterial pressure and of very full habit, he concluded that venesection not only did good by lowering blood-pressure, by relieving, in some degree, the load upon the kidneys and by removing, to some extent, the irritation of the nervous centres, but that its quickness of execution made it almost invaluable in such cases as a preliminary treatment. It renders the absorption of drugs more rapid and makes the sufferer more susceptible to the influence of other remedies. I do not think venesection useful, or even rational, in all cases. Only those women who are plethoric and who exhibit unusual arterial tension should be, in my opinion, subjected to this spoliative measure. Incidentally I would like to remark that, during pregnancy at any time when such symptoms are evidenced as would lead one to suspect some functional derangement of the kidneys, in such cases as those noted above as calling for venesection, my habit has been to use the lancet. The amount of blood taken is to be governed by the number and force of the cardiac pulsations.

Veratrum Viride.—As an arterial depressant veratrum viride has been highly extolled as a rational remedy in these cases. While my individual experience with this drug has been small, yet the few times I have employed it have set at rest any doubts I may have had as to its efficacy aud have led me to believe that the claims made for it rest upon a substantial basis. It reduces the number and force of the heart-beats and necessarily lowers the arterial pressure—one of the chief ends to be attained. In all cases in which the powers of life are so sapped as to make the employment of the lancet doubtful, in the treatment of all enfeebled and high-tensioned women, upon whom the perils of maternity must come and upon whom there is danger in resorting to too vigorous depletion, the employment of this drug finds its true field, and the results will show that the reasons for its employment are based upon true conceptions of the causes. Veratrum should be given in large doses, beginning with not less than fifteen or twenty minims and repeated every half hour·until the heart-beats number not less than fifty or sixty per minute.

Chloral, etc.—I shall only mention the use of chloroform, chloral hydrate, bromide and the many other sedatives and antispasmodics advocated and in use. Their generic names will give you the reasons for their employment. Chloral and potassium bromide, by the rectum, are no doubt of value, but their difficulty of administration and slowness of action make them more subsidiary to other measures than to be classed among our most potent weapons. For chloroform I have no use in puerperal eclampsia. The only time it has been used in my practice has left upon my memory a painful recollection, and I am free to confess that the contemplation of the use of this drug is not productive of the most fascinating reflections.

Mr. President, the employment of morphia and venesection in the class of cases noted above as calling for the lancet, and morphia and veratrum viride in those indicated as calling for less vigorous depression, together with the use of the subsidiary sedatives, chloral, bromide, valerian, etc., make up what I conceive to be the sedative treatment of uræmic fits. Add to these things carthartics for their depleting effects, and further because we desire the vicarious action of the bowels, diaphoretics, so that the skin may eliminate, as far as possible, the retained poisons; diuretics to assist the kidneys in their labor to rid the system, and we have made up what, to my mind, appears to be the *rational* treatment of puerperal eclampsia. It is not my purpose to prescribe an especial cathartic, or diuretic, or diaphoretic. I will only mention that my preference is for the salines during pregnancy if an attack is threatened, and for calomel, in minute doses, in the beginning of an attack—this last for the reason that, as you know, it combines valuable diuretic properties with its action as a cathartic, and its ease of administration is a further consideration for its use. Of diaphoretics, pilocarpine presents itself as the most convenient and efficacious, and, in conjunction with the hypodermatic use of this agent, the hot pack is of great service in producing an effective action of the skin, and with reference to diuretics, my habit has been to give the acetate of potassium conjointly with such others as each peculiar case demanded. I am not, however, insistant upon the above-mentioned drugs, since all of us have our own preferences with reference to what drugs are best—the only rule is to meet the indications by what you consider the most effective therapeusis. While the first indication is to establish the functional activity of the emunctories in these cases (for the loss of this is the fountain and origin of all the evil), we all know that our first endeavors, upon being called to such a case, are directed toward stopping and preventing the outbreaks. The sedative part of the treatment is what was in my mind when this subject was first contemplated and upon which I have, for the most part, dwelt.

The rationale of the other part, or what might be called the constitutional treatment, is so plain that it needs no elaboration; hence it has merely been mentioned; not but that its importance is as great, but because its conception is easier.

In concluding this paper I shall apologize for the many prolixities and repetitions in it. As an excuse, my only plea is my great desire to make each proposition relating to treatment find its base upon the propositions laid down as to etiology. I have offered no statistics; I have brought forward no clinical proof that my statements with reference to treatment are true; but if you admit the causes, you will be forced to admit the reasonableness of the remedies presented. With the increase in zeal to lessen the sum of human misery, with the advances in instruments of observation and precision, and as freer intercourse is had between scientists of different nations, it may be that in the light of further investigation some other causes than the ones now assigned may be given and accepted as the producers of puerperal eclampsia, and our treatments may become as obsolete as the ideas of old empirics are to us. But in the light which we have we must be guided by the views of those eminently qualified to teach us concerning these things, and, blieving them, we must so use our judgment as to erect upon these well-grounded theories treatments which have in them soundness of reason.

DISCUSSION.

Dr. McDowell stated briefly a case he had some years ago. It was a case of insufficiency of kidney action in pregnancy. It did not result in eclampsia, from the fact that voluntary abortion came on. One of the interesting features was the early period in pregnancy in which the symptoms made their appearance. In this case the symptoms were prominent as early as the third month. The flow of urine was absolutely nil. The patient herself did not know of the dangerous condition she was in. His attention was called to it casually. He went to see her and found her suffering from almost absolute amanrosis. She could tell when a large body passed between her and the light, but was not able to see her mother or husband and recognize them, and was yet able to attend to her duties. The symptoms became more and more pronounced and she continued in that condition for several weeks. Occasionally she had an exacerbation of symptoms, which were frequently relieved by a hot bath. She continued that way until she voluntarily aborted about the close of the fourth month. Since that time she has a well-developed case of Bright's disease. He asked if any other members had noticed permanent Bright's disease in pregnancy? The urine being examined closely, was found to contain nearly 40 p. c. albumen. Now, at intervals of a week or ten days, the urine gives 12 p. c. of albumen. She is now up and attending to her duties. He thought amaurosis a symptom of real insufficiency in pregnancy, and that Bright's disease is a result of that condition, but his experience was limited.

Dr. Faison had listened to the paper with a great deal of pleasure, as he had had some experience in that line. About ten years ago he was called to see a woman in a trance: It was at Mt. Olive. She was a large colored woman, and had during the day twenty-three convulsions. A few days before he had read in a *Medical Record* an article of a gentleman in Pennsylvania advocating large doses of morphine. When he found this woman it seemed there was no hope; labor had progressed very slowly. With a great deal of fear he gave the woman two grains of sulphate of morphine, at one dose, hypodermically. He felt that if there was any hope in the world he would get it out of that article. The woman had no more convulsions, and as soon as she went under the influence of the morphine he dilated the cervix, turned the child and delivered it. The next morning, on going back, the woman could not be aroused by anything he could do, but her heart was beating, and he did not give her up. In the afternoon, when he went back, her husband and children met him smiling and laughing. She was conscious and bright and went on to a rapid recovery without fever and without trouble. That was the largest dose of morphine he had ever given, and he did not think he would have the courage to give it again, still he was glad that he gave it that time.

About two weeks ago he was called to see a woman suffering from anæmia. He got a little of the urine and took it home and the greater portion of it solidified immediately. He went to work to get her kidneys to act. She never passed four ounces of urine in twenty-four hours during the whole two weeks, with the most heroic treatment. The brain was very anæmic. He tried a solution of nitro-glycerine, thinking to dilate the vessels and increase the flow of blood in the brain. The pain in her head was very intense. On the next day, at 9 o'clock a. m., she went completely blind, which condition lasted six hours during the day, and in the afternoon she began to see. That state of affairs existed for two weeks. During the week there was no increase in the action of the kidneys and no diminution of the albumen. On Thursday night he was called to her, she being in labor. She was having rather intense pain, the cervix was dilated and he ruptured the sac in order to hasten the labor. He had never seen so much water in a sac in his life before. The child weighed about three and a half pounds. She delivered very rapidly and has had no bad symptoms. Her blindness came on the next morning at 9 o'clock. She was blind every day and he had left her blind. Her kidneys had begun to act and the urine had gotten to the amount of a quart a day. Her neck was so enlarged that it was filled up from the ear to the shoulder. Her appetite came on. Two years ago she was confined and went through this labor and trouble alone. She was blind then and was blind three months after the confinement.

Dr. Noble reported the following case: He was called one morning to see such a case as Dr. Faison had described. He saw a strong, healthy woman sitting in the corner and she said: "I am as well as I ever was in my life." He was about ten feet from her and she could not see him. He took some of her urine home. In about half an hour she began having convulsions and he was sent for about sunset. He went into the room and gave her a dose of morphine, how much he could not tell. He poured it from his bottle into a spoon, with a little water, and gave her the spoonfull. It was probably about a grain and a half. The next morning she was up and sitting in the corner when he called, but could not see anything. He put her on the treatment of acetate of potash for thirty days. He reached the house just in time for the child to be born. She had had, probably, two children before, and each time had had convulsions and the child died. She had had two since and they all came to the full term, and she had had no convulsions since.

Dr. Tayloe considered Dr. McMullan's paper as entirely covering the ground in every respect, and he knew of no remedy that could be used with better effect.

Selected Papers.

SOME SUGGESTIONS IN RECTAL SURGERY.

By J. M. Mathews, M.D., Professor of Surgery and Diseases of the Rectum, Kentucky School of Medicine, Louisville, Ky.

(Read before the Niagara University Alumni,
Buffalo, N. Y., May 16, 1895.)

When the invitation came to me to read a paper before this Association, I must confess that there seemed to be no time at my disposal. But, having been in attendance at the American Medical Association last week in Baltimore, I extended my trip to the East in order to be with you to-night. I have thought, in selecting a subject for the occasion, that it was the proper thing for the shoemaker to stick to his last, so I propose to take some of your valuable time in discussing—

Some Points in Rectal Surgery.—Eighteen years ago I first conceived the idea, and after much hard work put it into execution, of making diseases of the rectum a specialty. At that time there was no specialty either in this country or in Europe. Since then some one or more distinguished surgeons in every large city of the Union have adopted the specialty. This, of course, is gratifying to me. I shall reserve the right in this paper to express an individual opinion upon all subiects touched upon, and in differing from others I mean no disrespect, and do not wish to appear either dogmatic or egotistical. I shall refer in the paper only to those points that are mooted.

Hemorrhoids.—Authors who have written specially on diseases of the rectum have divided hemorrhoids into two main classes: First, external, second, internal, and then have subdivided the classification into varieties of two external and three of internal. Of the first, a tag of skin or a thrombotic tumor go to make up this class. Of the second variety, such terms as arterial, venous and capillary are used to express them. Now, in truth, it makes very little difference with the operator whether piles are classed at all. For convenience sake it would be much better to say, with Mr. Erichsen, "all external piles should be cut off, and all internal piles tied." In my opinion the universal advice given, to let out the clot of a thrombotic pile, is non-surgical. After such an incision is made it takes the inflamed tissue which is left just as long to disappear by reabsorption as it would have taken nature to absorb the clot. In a word, then, all external piles should be cut off. A clean, even base is left, and the patient is well in one-half the time. when compared to the other plan.

Internal Piles.—It matters very little with the operator whether internal piles are venous, arterial or capillary in nature. To diagnosticate such would not alter the operation in the least. Again, the classification is erroneous, for the reason that no hemorrhoid is made up exclusively of arteries, veins or capillaries. As to the method of ligating piles, I object to the plan usually named as that of Mr. Allingham, but is the one proposed by Mr. Salmon, namely, that the cut should be in the sulcus, or white line, and carried down to the base of the pile, and after ligating, that but a small portion of the pile should be cut off. If superfluous skin exists around the anus, it is much better to include it all in the incision made and by the ligature used. If such mass is transfixed and tied tightly, it should be cut off in such a manner as to leave but a small base to slough. The idea that a contraction takes place after such an operation is chimerical, and even if it did, one dilatation with the speculum would overcome it. After operating upon over two thousand patients for piles, I have never encountered contraction but in two cases, and they were relieved in the manner described. I have said that all internal piles should be tied, because my experience has taught me that, compared with all other methods, the ligature is the simplest of execution, freest of danger and most radical in its results.

Fistula in Ano.—This term does not in fact bear out the significance intended. Very few fistulæ in this region relate to the anus at all. Many of them communicate with the rectum, and some fistulæ in this neighborhood neither affect the anus nor rectum. A buttock may be extensively invaded, the perineum destroyed, or a sinus run high up the back, when it will not be necessary to follow the time-honored injunction to push a director through the sinus into the rectum and divide all the tissues thereon, including the sphincter muscle or muscles. Indeed, such a procedure would be out of the question in many of these cases. From time immemorial anal fistulæ have been divided into three varieties, namely, external, internal and complete. Great stress is laid upon the importance of finding the internal opening of a fistula before operating. So far has this fallacy gone, that I have known surgeons to refuse to operate for fistula in ano because the internal opening could not be found. This is sheer nonsense. After the main cut is made for fistula, how easy it is to trace the channel to an internal opening, if one exists. I desire to say in this connection that no idea whatever can be conveyed to the surgeon by the appearance of the external opening of a fistula. Some of the most serious cases that I have ever operated upon were those having a small, insignificant opening. Many times a whole buttock will have to be sacrificed to effect a cure in such cases. The etiology has much to do with determining the method of operating, looking to its cure or eradication.

To classify the disease simply by physical signs, such as external, internal and complete, gives but a faint idea of its nature; or to describe a fistula as a narrow channel, or sinus, lined with a so-called pyogenic membrane, is so far fetched as not to deserve recognition. No membrane ever secreted pus, and yet this term pyogenic is still used by some writers. Again, very few fistulæ are ever seen which are made up of a narrow channel or sinus. If such terms should be taken as guides in estimating the amount of disease, or mapping out an operation, not one in fifty cases would ever be cured. A far better division of fistula in ano, in my opinion, would be, namely, progressive and non-progressive. Some fistulæ can be left without an operation for an indefinite time. Others are so distinctive and destructive in their nature as to require immediate attention. Instead of mere sinuses in the region of the rectum, well-formed cavities with a continued disposition to break down tissue will often be found. Outside of the risk of sepsis in such cases, the local destruction may be so great as to render the individual a cripple or an invalid for life. It is a well-recognized fact that abscesses around the rectum, in a heavy percentage of cases, end in fistula. Many account for this fact by the statement that the circulation here is impeded by the absence of valves in this portion of the blood circulation. But a factor of far greater importance is overlooked, namely, that the tissues being soft, fatty and often flabby, are unable to resist the inflammatory process. Besides, it must be remembered that certain diatheses, or cachexias, render these tissues peculiarly susceptible to the destructive process of inflammation. But even in healthy tissue the inroad from the inflammatory deposit is often such as to make an active and destructive condition that, unless heeded at once, ends in a serious complication of affairs. With this idea in mind, I would suggest some things which I think necessary in the successful treatment of this very troublesome affection. Speaking from a large and varied experience in surgery, I desire to say that it requires more delicate and precise operating to cure a complicated condition of fistula in ano than any other surgical affection of which I can think. In referring to the treatment of fistula I shall have nothing to say of the use of caustics, injections, ligatures, etc., proposed by some for the cure of this affection. They are, to say the least of them, unsurgical and unsatisfactory. It is well known that there are comparatively but few cases of fistula in ano that are limited to a single tract. Indeed, the most prominent thing that should be brought out in operating for this trouble, is the laying open of all communicating branches. This can only be done, of course, by the use of the knife. It is too common with the profession to think of fistula in ano as simply an opening from the true skin down to or into the bowel. The fact is that all adjacent parts of the rectum may be undermined or invaded by these fistulous channels. It can be easily understood, looking to the pathology of this affection, that no treatment can compare with the knife in dealing with it. By its use all sinuses can be divided, the bottom of fistulæ cut through, overhanging edges trimmed away, such precautions which are absolutely necessary to a cure in such cases. The old idea that fistula in ano acted as a derivative in tubercular affections of the lungs is of course obsolete and appears in a ridiculous light to-day. Therefore the early eradication of the trouble, even in tubercular subjects, is much to be desired, and which can often be accomplished by an operation.

Ulceration of the Bowel.—I am constrained to believe, from my correspondence with physicians and the knowledge gained in consultation, that the opinion prevails that ulceration of the rectum (benign) is of most frequent occurrence. I wish to go on record as saying that it is the most frequent of all rectal troubles. Indeed, in eighteen years of experience in this line I have not seen one-half dozen cases of ulceration of the rectum due to simple causes. This alone would force me to believe that the statement of writers that this trouble is a frequent occurrence is chimerical. Mucous membrane is very seldom the seat of ulceration, except it be of a special diathesis. So well pronounced are my views on this subject, that I desire to state, without argument, whenever I see a well-pronounced case of ulceration of the rectum I am at once convinced that it has its origin in one of three conditions, namely, syphilis, tuberculosis or malignancy. As I have put myself on record, in my work on "Diseases of the Rectum," as saying that such causes of ulceration of the rectum as dysentery, pressure of the child's head, constipation, etc., are of the rarest occurrence, I would respectfully ask that the members of this Society call up any such cases in their minds and report them. So well persuaded am I that all such combined are insignificant as a cause of ulceration, that whenever I see an ulcer of a pronounced type in this portion of the gut, I know that it is of a much more serious origin than from any such causes as these. The three great factors, therefore, in my opinion, in producing ulceration of the rectum are tuberculosis, syphilis and cancer. With either one as a cause, ulceration is a very grave affair. If stricture of the rectum should result from any cause outside of these, it is easily remedied. It must be seen that such a stricture could only involve the mucous membrane, and would be annular in appearance. A simple dilatation would effect a cure. But a very different condition of affairs would result from either one or the other of the three mentioned causes. In other words, a stricture from pressure, trauma, dysentery, etc., would be a benign or simple stricture. Whereas, from the last mentioned, namely, tuberculosis, syphilis or cancer, the stricture would be secondary to a constitutional affection. We are too apt to look for a demonstration of tuberculosis in the lungs, possibly in a joint, when from a later study of the disease it is recognized that the tubercle bacilli may have as a starting point any tissure or tissues, of the body. Notably is this true of the rectum. My record book will show many cases where tuberculosis has attacked the rectum and left other tissues unaffected. In regard to syphilis as a cause of ulceration, with consequent stricture, I have before this given it as my opinion that fully sixty per cent. of such cases result from this cause. I only ask a careful compilation of your cases to verify this statement. In this connection I wish to give it as my opinion that stricture of the rectum resulting from syphilis is just as incurable as cancer, the only difference being that cancer kills more speedily and that the sufferer from syphilitic stricture has a long lease on life. Strictures from cancer often exist without the manifestation of the pronounced symptoms that we usually expect. Indeed, there are many cases recorded from my practice where only constipation was complained of, with some reflex pain in contiguous organs. Of course this only holds good when the growth is located above the sphincter muscle and does not involve it.

Treatment.—Of course I can only suggest the manner or method of treatment of ulceration of the rectum, not having the time to enter into a full description of any plan. For a tuberculous ulceration there can be but one method to suggest. In the light of modern research it must be conceded that tubercular disease can have its origin or starting point in any tissue. The lungs may be secondary, in this trouble, to any other portion of the body. The surgeon meets with a tuberculous knee-joint, he excises it; if with tuberculous bone, he removes it, not only for its local effect, but from the knowledge that a general infection can take place from such foci. Therefore if a tuberculous ulceration of the rectum exists, it must be thoroughly curetted. I am confident that I have prevented a general infection in a number of cases by a full and complete curettement of the rectum. Of the syphilitic rectum nothing so good can be said. Whatever may have been the opinion of pathologists a decade ago, it must be agreed to-day, if syphilis affects the rectum, it is by a secondary deposit. By a gummatous building-up process. This assumes a fibrous condition beyond the power of nature to reabsorb. We must therefore accept the ultimatum, and do the best we can. I believe that the land-marks are plain enough, and the physical signs sufficient to draw the diagnostic line between strictures from this cause and the other causes I have mentioned. I might concede that, if syphilitic ulceration of the rectum was detected in its incipiency, that constitutional medication might effect some good. But not so with the condition of which we are speaking.

When a decided stricture exists it becomes a matter for surgical interference. What shall it be? I am familiar with the fact that some writers deal with all serious ulcerations or strictures of the rectum in one of two ways—surgically, total excision or colotomy. I am averse to both. If syphilis has affected the lower rectum and results in stricture, it certainly appears advisable to divide or break the stricture and avoid the opening in the side. Especially is this true when we recognize that the process of infiltration is more or less self-limited, and we have nothing to fear in the extension of the disease except the obstruction. A free proctotomy in such cases is much better than a colotomy. If a stricture, the result of syphilis, exists in the movable or the upper rectum, I believe that it is an ideal case for a colotomy. It is a localized condition without the power of extension; nature cannot reabsorb it, and obstruction results, which to all intents and purposes is purely mechanical. If it is dangerous to dilate, an opening can be made above and the patient live indefinitely. How different from a cancerous stricture! The destructive process goes on, ends in death, regardless of the colotomy. In cancer of the rectum, or cancerous stricture, the two methods mentioned, namely, total extirpation or a colotomy, is resorted to. First, let us consider the propriety of total excision. With so many to recommend it, I feel some diffidence in entering my protest against it. Mr. Kraske has designed a most excellent operation for the removal of the rectum. But I would beg to ask, When is the operation justifiable? There are two propositions that I would submit for argument in reasoning against this operation. First, Is the patient ever cured of the trouble operated for by said operation? Second, Is the patient ever materially benefited or relieved by the operation? I beg to take the negative to both propositions. First, I take it for granted that the only cause for which it could be said that total extirpation could be advised is malignancy. I use the term synonymous with cancer. We note, then, the characteristic features of malignancy as follows: The disposition to grow, to ulcerate, to infiltrate and to propagate. It is an aphorism well known in surgery in cases of cancer, to "operate early if you desire success." All teachers, too, know how assiduously they teach the student to do a thorough operation and "cut wide of the mark" whenever dealing with this character of tumor. For instance, when removing malignant growths of the breast, how important it is, we say, to remove the glands in the axilla also. Again, how insidiously does a cancer invade the system and establish a cachexia. How difficult to tell the dividing line between a local condition and a general infection! Add to this the suspicion always that the tumor has likely propagated. These questions are difficult of solution, even when the growth is situated upon the external parts. How much more difficult when located in an obscure part of the anatomy, as in the rectum. Cancers found here are so stealthy in their growth and in the invasion of tissue, that oftentimes the whole rectum is blocked by the mass when only symptoms of constipation and some reflex pain are complained of. Tissues surrounding this portion of the gut are soft and easy of invasion, the blood circulation is great, the lymphatics are freely distributed. The contiguous parts are vital ones, the bladder, peritoneum, the prostate gland and the vagina in the female are all easy of invasion. By the time that a growth in the rectum has assumed sufficient propoitions to be diagnosticated as cancer, many of these parts are already invaded by the piocess of infiltration. To dissect and draw down the rectum in the normal state may be comparatively an easy matter, but to completely dissect out a rectum that is so pathologically changed, as in a cancerous growth, is nearly an impossibility. Besides the difficulty of accomplishing its free dissection, it is one of the bloodiest operations that I have ever attempted. Admit that it can be successfully done, what amount of good accrues to the patient ? Infiltration is clearly proved by the amount of adhesion that is witnessed. Can we now "cut wide of the mark ?" I believe that every surgeon present will concur in the opinion that, to make the operation complete, all glands in the inguinal region should be removed. But what about the infiltrated tissue left in and around the rectum ? Then, of what use is the operation ? A bloody procedure, rectum gone and infiltrated tissue left. Would any sensible surgeon dissect out a cancer in the breast and cover the wound with infiltrated flaps ? Why, then, should a surgeon dissect out a cancer of the rectum and leave infiltrated tissue ? If a growth of the kind is situated in the lower part of the rectum, of course it can and should be excised, for we take the precaution here to "cut wide of the mark." It may be said that after excision the patient lives for several years. (?)

I shall not take your time to enter into an argument *pro* or *con* concerning colotomy for the relief of cancer of the rectum, but will make it suffice to offer a few suggestions for your consideration. It must be a well-recognized fact that in the majority of cancers of the rectum located above the sphincter muscle pain is not a factor. It must also be admitted that, as a rule, these patients do not suffer from obstipation to any marked degree. Why, then, do a colotomy for the relief of pain that does not exist, or for an obstruction that oftentimes does not take place ? No one will contend that by doing a colotomy that cancer of the rectum is either cured or its progress materially stayed. If an obstruction does exist, and is within reach of the finger, it is much better to do a proctotomy than to open the side. It is a disgusting operation at best, promising very little, and should be avoided if possible.—*Mathews' Medical Quarterly.*

HAVE WE ANY MEDICAL FACTS?

By John R. Hamilton, M.D., M.C.P.S, Port Dover, Ont.

Inasmuch as the practice of medicine is largely composed of anomalies, we are often led to regard the classification of diseases as greatly at fault, and to believe that the earlier teachers were often in error, both as to classification and therapeutics.

A few decades since venesection was considered an essential factor in the management of each and every aliment of the human race, to be followed almost as unvaryingly by some of the depressants—antimony, for example; but to-day the demand is for stimulation and general supporting measures. It would now be difficult to point out a practitioner who dares practice blood-letting except perhaps in some rare and special instance. The old-time calomel, while it still holds place in the *armamentarium therapeuticum*, no longer serves the purpose of a cholagogue, for which action it was originally extolled. In a case in which cholecystotomy was performed by a medical friend it was found the flow of bile (which was collected for several days) was actually decreased by the administration of mercurous chloride; also that it was greatly stimulated under the use of bismuth salicylate, a drug for which hitherto no such specific action had ever been claimed.

When we look back upon the myriad of new remedies that within less than a decade have become candidates for a place in the materia medica, only to shine for a month, perhaps, and then flicker and die, is it any wonder that doubt succeeds doubt and that the beliefs inculcated at the inception of the medical career are constantly being weakened? Look at the coal-tar derivatives and imitations in their numberless forms and striking nomenclatures! Each and every one has been claimed as a specific, true and absolute, in some form of febrile or nervous disease; and yet all, when put to the test, proved to be either flat failures or of so uncertain and dangerous a character that they can be employed only in conjunction with some powerful heart and nerve restorative. In the near future—indeed, the reaction has already set in—we will be compelled to fall back upon less persuasive, but much more safe and satisfactory drugs, such as obtained bfore these new medicaments made their *debut* in the medical world and set all rational therapeutics at naught. Another potent reason for discarding these synthetics and pseudo-synthetics is the prevalent practice of indiscriminate prescribing by the counter-chemist—a practice that is so demoralizing and so fraught with danger to the public as to demand special legislation; it is well known that these products can only be safely prescribed by a qualified physician, and even then their action requires to be critically watched, yet the percentage marketed through legitimate dispensing methods is known to be but a tithe of the great total of sales.

The arguments employed, *pro* and *eon*, regarding the use of alcohol in medicine, are enough to befog the brain of the most faithful student; yet how few medical men can be found who, after a few years of practical experience, would undertake the duties of their calling without the aid of this drug! When we reflect on this and many other questions of like nature that confront us at every turn of life, it must be concluded that, leaving anatomy aside, there are very few medical facts.

On turning to pathology it is discovered that there is an even more marked division as to cause and effect than in therapeutics; and when was added the pathogenic microbe, confusion seemed to have reached its maximum. Perhaps at no time in medical history could this fact be more fully realized than in the present juncture, when it is found that the most beautiful platform erected by pathogenic bacteriology speedily crumbles before calm and dispassionate investigation. In Germany the Klebs-Loeffler bacillus first saw the light of day, and was claimed to afford certain settlement of all diagnostic disputes; but alas for the theory! the same little microbe is found in a score of maladies other than diphtheria, and moreover is frequently entirely lacking in the latter. So, too, the "cholera bacillus," so-called, is no more pathognomonic of the Asiatic scourge than of every-day rural scabies. We find another example of doubt when turning to a disease more generally prevalent than either diphtheria or cholera, namely, typhoid fever. In this malady, only a short time since the careful physician hesitated before he presumed to prescribe that mildest of cathartics, castor-oil; but now, forsooth, it is found, according to the report of a Toronto practitioner, these cases should all be treated by active purgatives at the very outset, whereby the percentage of mortality will be greatly lowered—I give this statement for what it is worth, but decline to stand sponsor thereto. And so we have a labyrinth of conflicting opinions, all doubtless the outcome of honest conviction and research, but which tend only to more impress the opinion that the profession is deficient in absolute medical facts.

In corroboration of the foregoing divergencies of opinion, I have to dwell on an epidemic of very unique character that occurred in my own neighborhood during the autumn and early winter of 1894. For any parallel to this the young practitioner would search his text-books in vain, as the only approximate classification is a few lines by some author on herpetic tonsillitis, and even here the most striking symptoms are conspicuous only by their absence. This malady at times presented more the signs and symptoms indicative of diphtheria than those of tonsillitis. So prevalent was the epidemic that scarcely a family escaped its visitation. On examining the throat, the exudate was generally found so exuberant as to form large patches in the same region of the fauces as the diphtheritic deposit occupies, remaining about the same length of time, and producing, in many instances, slight hemorrhage from the nose and throat. There was the same tumefaction of tonsils, swelling of cervical glands and serous infiltration of surrounding tissues causing enlargement of the neck—of shorter duration, however, than in true diphtheria. In only one case did I see suppuration of the gland in a strumous subject.

The affected children generally had a decided rise in temperature, sometimes to 103° at the evening exacerbation. The pallor and listlessness of diphtheria were largely wanting, although in some cases drowsiness presented itself as one of the symptoms. The difficulty in deglutition, so common to all diseases of the throat, was perhaps more marked, but in most cases the appetite for food was not wholly wanting, and in many the amount of daily nourishment taken was about the normal quantity of health. The color of the exudate appeared to the naked eye to be nearly that of diphtheria, but perhaps not so ashen, and when removed from the throat dissolved more readily. The duration of the disease, in most cases, was about seven days, and convalescence supervened and progressed much more rapidly than in the more malignant disease. In no instance that I can recall did paralysis present itself as a sequel, the only thing of this character being a hoarseness, or a nasal twang to the voice, that soon passed off.

Of this particular form of tonsillitis we must have had in this small town and neighborhood at least one thousand cases, while in the county at large two thousand would probably be nearer the mark; and of this vast number, not one death was ever chronicled that I could discover, either from the disease *per se* or from its sequelæ; in fact, as soon as the dread of the epidemic, with its very diphtheria-like symptoms, had passed off, and it was discovered to be self-limited, many families declined all medical attendance, nursing their sick through the trouble as in ordinary cases of cold or mild bronchitis.

Every practitioner has not the time or appliances to make a culture test, nor the knowledge of the bacillus that would enable him to detect it when made; therefore, during the prevalence of this epidemic, as a matter of satisfaction to himself, one of my medical compeers sent a piece of membrane to an expert in a neighboring city, who promptly reported it harbored the Klebs-Loeffler germ. The case from which this was taken in nowise differed from the others; it made the same rapid recovery and exhibited none of the symptoms of depression or paralysis, or any other diptheritic sequelæ. Now, if in this case the Klebs-Loeffler bacillus was present—and I have no cause to doubt its presence—we certainly have good grounds for accepting Hansemann's statement, corroborated as it is by a score and more of equally reliable observers, that the so-called diphtheria bacillus is often wanting in true diphtheria, and as often present and harmless in many other diseases of the throat.

The question now naturally arises: Have we this bacillus with us at all times? Does it remain dormant, merely awaiting an opportunity, when the fortress is not guarded, to assert its virulence? In other words, is it always a stealthy enemy, lying in wait for the moment when atmospheric pressure is suitable and the vital force of the patient at low ebb, as some pathologists claim of the tuberele bacillus?

In view of the foregoing history of an epidemic, the like of which every medical man must have seen, or something similar in the way of anomalies, we are forced to the conclusion that the most learned of our profession have yet much to learn of diphtheria and its allied diseases, and when the anti-toxin treatment has been in use for a few years we may still discover we have only a few medical facts.

When one comes to the practical part of this or a similar epidemic, he can readily pardon the young man who calls it diphtheria, who naturally thinks his treatment specific, and wonders at his marvellous success; but unfortunately, sooner or later after this great run of success he is certain to encounter an epidemic of the genuine death-dealing diphtheria in which he loses every third case, when he will be apt to lay the blame of ignorance upon his teachers and text-books, because neither were sufficiently explicit in the differential diagnosis of diphtheria, and gave next to nothing as to the pathology and treatment of herpetic or follicular tonsillitis—nothing to enlighten him as to whether he is dealing with a simple and harmless case or with one of great dread and danger—in fact, whether he has on hand a case of life or death. While we excuse the younger man for his rashness in pronouncing a disease diphtheria which is not, we can never forgive the more aged schemer who pronounces it diphtheria for a sinister purpose. He sees in it a grand opportunity to increase not only his statistics, but his popularity and his purse; by doing so he gets the ear and attention of the thoroughly frightened parents, who have seen (according to their limited sense of vision) just such cases in the family of Jones and Brown during a former epidemic, where every third case died, while their present subject's advisor is not losing a case. Such fireworks are, however, generally, and fortunately, of short duration, and the owner is soon only in possession of the rocket-stick; nevertheless he will re-light this when the next epidemic of roseola visits his constituency, which of course will be called "scarlet fever" and treated with unprecedented success.

When we see nosologists and all medical writers, in fact, going to great trouble to give the differential points between diphtheria and scarlet fever—a fact ten times more easily discovered by the student of medicine than the differential diagnosis between the former and the epidemic malady just under consideration—we are again forced to believe that the authors of the future will view diphtheria in a different light than they have done in the past, and not try to convince us (as many eminent men of the British Isles have done) that croup and diphtheria are one and the same disease; in fact, a few good men still cling to that belief. We, of course, who have practiced in this country, think we see such a marked contrast between the sthenic croup and the asthenic listless diphtheria, that we wonder at such a conclusion, and wonder more whether we have any medical facts.—*Medical Age.*

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Editorial.

The Bursting Theory as Applied to the Diagnosis of Fractures of the Skull.

In 1886 Dr. Charles W. Dulles read before the Philadelphia College of Physicians a paper expounding the theory known as the "bursting theory" of indirect fractures.

He has recently, June 3d, 1895, presented another paper on the same subject to the Academy of Surgery, of Philadelphia. Many difficulties in diagnosis may be cleared up by this theory, and it should also be remembered in cases involving medico-legal questions. It will explain many cases of fracture outside of the regions covered by other theories as to the forces which cause fracture of the skull. The author gives the following brief oulines of the bursting theory: The skull is a hollow case, of a somewhat ellipsoid form, the wall of which is formed of bone, varying in thickness and density in different parts, and of a peculiar conformation, and with peculiar contents and coverings. When such a case is struck, or when it strikes upon a resisting body, it is compressed in a direction in the line of the force and counter-pressure (which latter may depend wholly on *vis inertiæ*). The result of this compression is to shorten the prime diameter, and of necessity to lengthen the transverse diameters. As illustrating this first phase of action, Sir Charles Bell, in the early part of this century, made an experiment (which is easy to repeat), in which he placed movable balls inside and outside of a hoop and touching it, and found that a blow upon any part of the hoop caused the ball immediately under it and that immediately opposite it to move toward the centre of the hoop, while those distant ninety degrees from it moved away from the hoop. If this experiment were to be modified so as to meet the conditions of a hollow sphere instead of a circle, we might place half of a hollow sphere upon a resisting surface, and, striking it on the upper pole, would find that this pole would approach the resisting surface and the circumference would be elongated and describe a larger circle. In such an experiment, made upon an elastic substance, the compression and elongation would be followed by a corresponding expansion and shortening. The first compression and elongation spoken of are of chief importance in indirect fractures of the skull, and in them we have (to use a simple illustration) conditions similar to those when an umbrella is raised. In the latter case it is plainly seen what takes place, namely, that, as the pole is brought nearer to the equator, this is elongated and the space between the meridians (the ribs of the umbrella) is increased. This increase being expected and provided for by material which lies in folds between the meridians, this is simply spread out. In a body with no such provision, however, any force that would bring its poles near together, and consequently lengthen its equatorial circumference and separate its meridians, would at once set up a struggle between the force applied and the cohesion of the particles lying along and between the meridians. If the power of cohesion were sufficient, there would be no disruption; if, however, it were not, then there would be a split beginning at some point near the equator, where the strain is most severe, and passing in opposite directions toward the poles. This is what would take place in a perfectly symmetrical homogeneous elastic body. What naturally takes place in the skull is shown by observation and experiment to be this, modified by the peculiar structure, contents and surroundings of the skull.

Of course there are cases of fracture that cannot be explained by this theory, but the author has found in 90 per cent. of all cases he has investigated fissures which go to prove the correctness of the theory. It does not provide the surgeon with certainty of diagnosis, but with suggestions of probability, which will increase his chances of making a correct diagnosis. A study of a large number of accidental and experimental fissures shows that blows upon the forehead directly in the middle line, less sudden and less extreme than would cause direct fracture at the point where the force is applied, are likely to produce a fissure of the skull, passing from front to back in or near the middle line, and more frequently at the base of the skull than in the vault. Blows applied to the forehead on one side or the other are likely to produce fissures in a line with the direction of the force, and crossing the skull to the other side. Such fissures occur almost always in the base, and they usually terminate in the middle cerebral fossa, though they sometimes cross the foramen magnum and traverse the cerebellar and posterior cerebral fossæ. Force applied to the middle of the occiput usually produces a fissure, passing in the direction of the force around the occiput, laterally or perpendicularly, sometimes separating the lamboid suture, sometimes splitting the lower part of the occipital bone and going into the foramen magnum, and sometimes crossing the petrous bone, breaking it transversely and passing into the foramen lacerum medius. Such fissures may pass straight down to the foramen magnum and (crossing over) split the body of the sphenoid bone and extend into the ethmoid or frontal bone. (Such fissures furnish typical illustrations of the correctness of the bursting theory.) Force applied to the side of the head, in almost all cases, produces a fissure passing through the base of the skull in the middle cerebral fossa. Such a fissure sometimes traverses this fossa completely and may pass entirely through the base and vault, dividing the skull into two halves. In some cases the fissure passes directly through the coronal suture; in many cases it splits the petrous bone longitudinally. In some cases force applied to the side of the head causes a splitting off of the posterior clinoid processes—an occurrence that is explicable only upon the supposition that the tentorium cerebelli, which is attached here and to the occipital bone, is put upon the stretch, when the skull is elongated antero-posteriorly and drags these portions from the body of the sphenoid. Force applied to the side of the head frequently produces fissures passing around the side of the head, through the parietal and squamous bones, and often passing to the basi-sphenoid, but rarely dividing it completely. In some cases force applied directly to the vertex produces a fissure in the long axis of the skull. Such a fissure may be of very great extent and may even divide a skull into two symmetrical halves.

Longitudinal (antero-posterior) fissures occur much more frequently in the base of the skull than in the vault.

Summer Session of the State Board of Medical Examiners.

The State Board of Medical Examiners met at Wrightsville on the 26th of August, and at the time of our going to press are still in session. There are present Drs. L. J. Picôt, Secretary, J. M. Hays, G. W. Long, H. B. Weaver and T. S. Burbank. Drs. W. H. Whitehead and J. M. Baker are detained at home. There are twenty applicants for license, four of them being negroes.

At the close of each day's work Examiners and candidates hie them to the beach and buffet the briny breakers of old ocean. It is a charming place for the summer session of the Board, and we trust that they will make it a yearly custom to meet there.

We will give the names of the successful candidates in our next issue.

Reviews and Book Notices.

Skiascopy, and Its Practical Application to the Study of Refraction. By Edward Jackson, A.M., M.D., Professor of Diseases of the Eye in the Philadelphia Polyclinic; Surgeon to Wills Eye Hospital; etc., etc. With 26 illustrations. Octavo, cloth, 112 pages. The Edwards & Docker Co., Philadelphia, 1895.

The determination of refractive errors in the eye by means of subjective measures has always been unsatisfactory.

The author claims as a reason for a general use of skiascopy by ophthalmologists: 1st. It is an objective test, independent of the patient's intelligence or visual acuteness, and more largely than any other, independent of the patient's coöperation. 2d. It is by far the most accurate objective test. 3d. It requires but little more time than the use of the refractive ophthalmoscope, or the ophthalmometer, which are able to give very inferior information. 4th. It requires no costly, complex or cumber. some apparatus. 5th. It lays before the surgeon the refraction in each particular part of the pupil as it is revealed by no other test, and opens up the principal avenue for farther advance in the scientific study of the refraction of the eye.

The author gives his whole attention to the subject in hand and does not waste time and space with the anatomy and physiology of the eye. The history, name and difficulties are alluded to in the first chapter, while chapter II. studies general optical principles as they apply to skiascopy. The method of using the test to determine myopia, hypermetropia, regular and irregular astigmatism is then studied. Chapters VI. and VII. are devoted to the practical application of the plane and concave mirror respectively.

Under the head of "General Considerations" the author gives many useful hints in regard to the apparatus. He recommends the use of mydriatics in patients under 50 years of age and prefers homatropine hydrobromate, two to four per cent. solution. Four to six drops should be instilled into the eye, one drop at intervals of five minutes, an hour before applying the test.

The book is beautifully printed in large, clear type, is a pleasure to read, and should be in the hands of all who correct refractive errors.

Book of Detachable Diet Lists for Albuminuria, Anæmia and Debility, Constipation, Diabetes, Diarrhœa, Dyspepsia, Fevers, Gout or Uric Acid Diathesis, Obesity, Tuberculosis and a Stck Room Dietary. Compiled by Jerome B. Thomas, A.B., M.D., Visiting Physician to the Home for Friendless Women and Children and to the News-boy's Home, etc. W. B. Saunders. Philadelphia, 1895. Price $1.50.

These ten lists have been compiled by the author from the most modern works on dietetics and will prove a great convenience. The busy practitioner has little time to prepare a written list of what his patient should take and what especially he should avoid. These lists are numbered and the key given in another place, so that there is no indication on the sheet to be left with the patient as to the nature of the sickness for which the diet table is given. The stub provides a place for the name of the patient and the date; one side of the sheet to be left with the patient has space for the patient's name, the date and directions; the reverse side gives general rules—what may be taken and what must be avoided.

The Sick Room Dietary is also detachable and gives recipes for various delicacies and nourishing dishes.

Abstracts.

ENEMATA IN THE TREATMENT OF DIARRHŒA.—In an editorial article the *Therapeutic Gazette* says: "We believe that large rectal injections, or injections of sufficient size to wash out the sigmoid flexure and colon, are not sufficiently resorted to, particularly in those cases of diarrhœa in which a catarrhal element is well-marked. In these catarrhal cases it will generally be found that, mixed with the watery portion of the discharge, there is more or less mucus in strings or flakes, which indicates, as a rule, that a certain amount of the trouble, at least, is situated in the colon. While the rule is by no means an absolute one, the presence of large quantities of mucus indicates very strongly that the whole trouble is in the lower bowel. It is evident, therefore, that the use of drugs by the mouth is a very indirect way of influencing the diseased area, since the medicament must pass through the œsophagus, the stomach, the duodenum and the small intestine before it arrives at the point where its therapeutic efficacy is to be developed. On the other hand, good results are attained if large clysters are given by means of a hydrostatic syringe elevated not more than eighteen inches or two feet above the rectum. Such treatment will frequently control the movements, limiting them to one or two in twenty-four hours, even if the fluid character of the stool remains unchanged. Various substances have been employed dissolved in the water to be injected. Some of them have not only a powerful local action, but in addition are capable on absorption of producing widespread influences throughout the body. Among these may be mentioned salicylic acid and its relatives, nitrate of silver, iodoform, when given in oil emulsion, and some of the vegetable astringents. The substance which has always given us the best results under these circumstances is the sulpho-carbolate of zinc in the proportion of ten to thirty grains to an injection, amounting from two to three quarts. In some instances the water should be tepid, in others it should be as hot as the bowel can stand, and in still others it should be quite cold, the temperature of the injection depending largely upon the acuteness of the inflammatory process and the sensations of the patient, for in the same way that an application of cold water is grateful to a sprained ankle of one individual, while another prefers hot water, so does one patient get comfort from cold injections and another from heated ones. If the water be cold, care should be taken that undue chilling of the body does not result in feeble persons, or if hot, on the other hand, that a mild degree of heat fever is not produced.

"The success of this treatment depends absolutely, in many instances, upon the gentleness and care with which the injection is given, and the water must be allowed to trickle into the bowl rather than to enter it with any force, for the three reasons that (1) if force is used, the bowel immediately resists the injection and perhaps forces it out; (2) it becomes so irritable that further injections are impossible; (3) this condition of rectal irritation reflexly causes irritability of the entire intestinal tract in much the same way that rectal ulcer may cause diarrhœa, and as a consequence the patient is worse than before the method was attempted. In those cases of chronic diarrhœa in which the patient is markedly emaciated and unable to digest much food, so that the condition of impaired nutrition is an important factor in preventing recovery, this method of treatment is to be highly recommended, and it is worthy of note that a small injection, amounting to an ounce or two of iodoform and sweet-oil emulsion, in the proportion of five grains to the ounce, injected into the bowel after a large watery movement has passed away, will relieve any tendency to tenesmus, and by the absorption of a small amount of iodine exercise a useful influence over the catarrhal process which underlies the symptoms which we are treating."—*N. Y. Med. Jour.*

THE PREFERABLE FORM OF QUININE TO BE USED IN THE PREVENTIVE THERAPEUTICS OF MALARIA.—In a report on this subject by Patein before the Société Thérapeutique, made in February, 1895 (*Rev. Int. de Med. et de Chir. Pratiques*, April, 1895), that authority concludes from his experiments, both chemical and upon animals, regarding the absorption of the drug, that quinine should be administered in the form of different salts, according to the purpose and period of the disease. The basic sulphate of quinine has been the standard salt employed for many years, while the bromhydrate and chlorhydrate have lately been preferred, especially for the hypodermic method of medication, because of their greater solubility. When, however, we come to prophylactic medication, a more slowly soluble salt is to be preferred, since it will then enter gradually into the system, and will thus keep up the effect of the drug for a longer period of time. The salt must also be one that is readily prepared. The conclusions arrived at by M. Patein are of great practical value; they are as follows:

1. Quinine in solution should be reserved for the attack of the fever.

2. As a prophylactic, the basic chlorhydrate should be preferred; it is the richest in alkaloid, and its solubility is sufficient; it is less irritant to the alimentary canal. The bromhydrate should be employed in cases

of rebellious fever where the chlorhydrate does not act rapidly enough.

3. All compressed tablets should be rejected; pills containing a soluble excipient only should be employed, while the gelatin-coated "perles" are to be preferred in preventive medicine.

4. These perles, containing four grains of the chlorhydrate of quinine, should be given, one in the morning and one at night, with a slight amount of liquid. This amount taken at these intervals is sufficient to maintain the system under its influence continuously.

5. Whatever the pharmaceutical preparation employed, it is always necessary to determine that it is soluble.—*Thera. Gaz.*

ANTIPYRIN IN SURGERY.—In the *Philad. Med. News*, of December 15, Dr. Roswell Park again calls attention to the value of antipyrin as a styptic. He has made frequent use of it since 1885, and does not hesitate to pronounce it the most valuable styptic we have, and an antiseptic as well, comparing "very favorably in this respect with most of the aniline or coal-tar derivatives that we use in medicine." He employs it most frequently in a five per cent. solution, in sterilized water, as a spray, and does not hesitate to use it in the peritoneal cavity, or upon the surface of the brain. He says: "I have found that antipyrin has power, not sufficient to contract vessels of any size that spurt, but to almost instantly blanch and check oozing from any surface from which blood is escaping just fast enough to be an annoyance." . . . "It may be injected into a cavity, as in bone; it may be applied on compresses to the oozing surface, or it may be sprayed as mentioned; but, no matter how applied, under circumstances indicated within the limits given, it will seldom, if ever, be found to disappoint." He has found it, bacteriologically and in practice, antiseptic, and it is practically unirritating. It is especially valuable in operations within the nose, mouth, urethra and bladder.

The remarkable analgesic properties of antipyrin, locally applied in inflammation of mucous membranes, have been pointed out by Hinkel (*N. Y. Med. Jour.* for October 28, 1888), Vigneron (*Concours Med.*, August 11, 1894), and others. We shall be glad to have reports from other surgeons who have used it, and especially pleased to know if it can be used without harm about the eyes. If so, it will prove a great boon to the ophthalmologist in some operations upon the eye and its appendages, which are often rendered very tedious and difficult by the presence of even a small quantity of blood.—Editorial in *The Railway Surgeon.*

THE PRESENT TREATMENT OF URETHRITIS IN NEW YORK.—Guiteras (*Med. News*, vol. lxvi., No. 14) states that the methods of treating this trouble in first-class institutions and private practice seem quite similar. In the best dispensaries the treatment carried out is as follows: The craze for examining for the gonococcus has abated, and most men conclude that in the vast majority of all cases of urethral discharge the germ is present. In the ordinary acute gonorrhœa, before the process has travelled back beyond the compressor urethræ, or cut-off muscle, diluents are administered, usually potassium salts or large draughts of water. Locally, treatment varies; some use boric acid or permanganate irrigations, together with hot sitz-baths; others give no local treatment. Others give astringent hand injections. When the case becomes indolent, silver nitrate irrigations are employed.

For acute posterior urethritis, diluents are employed, and by some silver nitrate instillations, beginning with one grain to the ounce and increasing in strength. Anterior injections are usually omitted. The more conservative employ no local treatment beyond hot rectal enematas, etc. In the subacute total urethritis, some use astringent injections of silver nitrate, potassium permanganate, or mercuric chloride, which they inject into the bladder, then have the patient expel by urination. Others make deep instillations of strong silver nitrate solutions and anterior endoscopic applications, giving boric acid as an injection for home use. If stricture is present, this is always dilated or cut.

Guiteras personally uses in the acute stage diluents and anterior hand injections. As a diluent, he employs a tablet containing 5 grains each of tartrate and bicarbonate of potassium. This effervesces when thrown into water. One is taken every three hours. The astringent hand injection is a modification of Ultzmann's, that is:

℞.—Zinc sulphate,
Alum,
Carbolic acid, of each, gr. v.
Glycerin, f ℥ ss.
Distilled water, enough to make 4 ounces.

This is used daily after urination, the anterior urethra being irrigated with hot water.

Where the case is markedly inflammatory in type, the injection is omitted. If the injection above given is not efficient, the following is then

℞.—Zinc sulphate, gr. x.
Extract hydrastis, fl., f ℥ ss.
Rose-water, enough to make 4 ounces.

Or, this failing, Ricord's injection is used.

If posterior urethritis occurs, anterior hand injections are omitted, diluents continued, with 10 drops of belladonna, three times a day, to relieve tenesmus. If the process is very acute, the patient is put to bed on a milk diet and given hot sitz baths three times daily. For very severe tenesmus, suppositories containing one-fourth grain each of belladonna and morphine are used. The bowels are moved by Rochelle salts or hot water enematas containing a little glycerin. As soon as symptoms abate instillations of silver nitrate are used, beginning with a grain to the ounce, gradually increasing the strength, making applications every other day. At the same time, sandal-wood oil is ordered, beginning with 10 drops and increasing 5 drops a day. This not answering, then cubebs, copaiba or the Lafayette mixture is ordered.

When the posterior urethritis is cured, astringents are again employed for the anterior trouble. If the case is rebellious, anterior injections are used once daily of 1 to 3000 potassum permanganate solution from a fountain syringe. Where this fails, silver nitrate is substituted (1 to 8000), increasing to 1 to 1000. Discharge persisting, search is made for stricture. This, if found, is dilated with an Oberlander dilator or an ordinary Otis urethrotome. After dilating by slow process, sounds are passed, anointed with equal parts of red mercuric oxide and vaseline. The urethra having a smooth bore and the gleety discharge continuing, an endoscopic examination should be made and silver nitrate applications made through it.

The author states that by silver nitrate injections 80 p. c. of cases treated have been apparently cured in less than ten days. They were treated as follows: The patient, after passing urine, has his anterior urethra washed out with warm water, and a syringeful of silver solution is then injected and allowed to escape immediately. A syringeful of a saturated solution of boric acid is then injected and retained for five minutes, and the patient is then requested not to pass his urine until as long a time as possible has elapsed.

The greatest care should be taken in the preparation and keeping of this solution, and it should never be increased beyond 10 grains to the ounce, or 2 p. c. in strength. The best method of keeping it is to have ten colored bottles filled with the different strengths of the solution, from one to ten grains to the ounce. These injections should be made with the greatest care, increasing one grain in strength each day. No pain is noticed by the patient, except a little burning at the third and fourth injections. The patient's discharge is usually checked or reduced to a little watery secretion on the seventh or eighth day, when the silver nitrate treatment is left off and the patient is put on anti-blennorrhagics and hand injections for a week, and directed not to drink or indulge in venery or other excesses for a period of three weeks. It is never necessary to go beyond a ten-grain solution. If the discharge has not ceased at this period, the treatment should be changed for astringent injections and anti-blennorrhagics.

Before beginning the above treatment the patient is placed on a diluent mixture and a hand astringet injection, the modified Ultzmann's being preferred. Then once a day an injection of a silver nitrate solution.—*Therapeutic Gazette.*

OFFICIAL LIST OF CHANGES IN THE PUBLIC SERVICE.

THE ARMY.

From August 8 to August 21, 1895.

Powell, Capt. Junius L., Assistant Surgeon U. S. A., is granted an extension of one month of his leave of absence.

Ewen, Major Clarence, Surgeon, is granted a further extension of his leave of absence of two months, on account of sickness.

Gibson, Capt. R. J., Assistant Surgeon, is granted an extension of his leave of absence of twenty-three days.

Tesson, Capt. Louis S., Assistant Surgeon. is relieved from duty as Attending Surgeon at Headquarters Department of the Missouri and Examiner of Recruits at Chicago, Ill., and ordered to Fort Ethan Allen, Vermont, for duty, relieving Captain Aaron H. Appel; Assistant Surgeon. Capt. Appel, on being thus relieved, will report for duty as Attending Surgeon and Examiner of Recruits, Chicago, Ill.

A board of officers to consist of Maior Philip F. Harvey, Surgeon, Major George H. Torney, Surgeon, and Capt. Charles F. Mason, Assistant Surgeon, is appointed to meet at West Point, N. Y., August 15, 1895, or as soon thereafter as practicable, for the physical examination of the cadets of the first and third classes; the cadets of the second class, on their return from furlough, and such other cadets of the U. S. Military Academy, and candidates for admission therein as may be ordered before it.

A board of officers is appointed to meet at Fort Robinson, Neb., on Friday, September 6, 1895, for the examination of Captain Lous W. Crampton, Assistant Surgeon, with a view to determining his physical fitness for promotion. The following is the detail for the board: Colonel Dallas Bache, Assistant Surgeon General, Major Henry McElderry, Surgeon, Major Jos. K. Corson, Surgeon.

Kieffer, Chas. F., Assistant Surgeon, U. S. A., is granted leave of absence for two months.

THE NAVY.

For two weeks ending August 24, 1895:

August 14.—Assistant Surgeon, M. S. Guest to the "Minnesota."

August 17.—Surgeon S. H. Dickson is detached from the Medical Examining Board to temporary duty in Bureau of Medicine and Surgery.

Assistant Surgeon C. P. Bagg is detached from the "Monterey" and granted two months leave.

P. A. Surgeon H. T. Percy is detached from the Washington Navy Yard to duty as a member of Medical Examining Board, Washington.

Assistant Surgeon H. D. Wilson, on arrival of "Monongahela" at Annapolis, is detached from that vessel and ordered to temporary duty at the Washington Navy Yard.

MARINE HOSPITAL SERVICE.

For the 15 days ending August 15, 1895:

Wasdin, Eugene, P. A. Surgeon, is granted leave of absence for ten days, August 1, 1895.

Williams, L. L., P. A. Surgeon, to proceed to South Atlantic Quarantine Station for temporary duty on being relieved by Assistant Surgeon, E. Prochazka, August 6, 1895.

McIntosh, W. P., P. A. Surgeon, is granted leave of absence for thirty days from September 1, 1895—August 5th, 1895.

Magruder, G. M., P. A., to assume command of small-pox camp, Eagle Pass, Texas. August 10, 1895.

Geddings, H. D., P. A. Surgeon, is granted leave of absence for thirty days on being relieved by P. A. Surgeon L. L. Williams.

Brown, B. W., P. A. Surgeon, to proceed to New London, Conn., as Inspector, August 15, 1895.

Roseman, M. J., P. A. Surgeon, to proceed to Eagle Pass, Texas, for temporary duty, August 4, 1895.

Nydeggerd, Jas. A., Assistant Surgeon, to assume charge of Detention Camp, Waynesville, Ga., in addition to other duties, August 14, 1895.

Prochazka, E., Assistant Surgeon, to proceed to Charleston, South Carolina, for temporary duty, August 6, 1895.

QUESTIONS SUBMITTED BY THE BOARD OF EXAMINERS AT WRIGHTSVILLE, AUGUST 26–30, 1895.

Materia Medica and Therapeutics.— Dr. L. J. Picôt.

1. Give symptoms and treatment of ptomaine poisoning.

2. Give symptoms and treatment of aconite poisoning.

3. Give prophylactic and curative treatment of nephro-lithiasis.

4. Give treatment of lithæmia.

5. Give symptoms and treatment of acute uræmic poisoning.

6. What are oxytoxics. Name principal ones.

7. Define difference between myotics and mydriatics and name chief mydriatics.

8. Give antagonistics to chloral.

9. Give treatment of chronic gastric catarrh.

10. What is hydrotherapy ?

11. Write two prescriptions of three ingredients each, stating for what each should be given.

Anatomy.—Dr. T. S. Burbank.

1. Name coverings of brain.
2. Describe the clavicle.
3. Describe the liver.
4. Describe the bladder.

5. What muscle is pierced by the femoral artery ?

6. Give linea guides to common carotid arteries.

7. What arteries make up the cœliac axis ?

8. Give difference between serous and mucous membranes.

9. Give the origin and course of the great sciatic nerve.

10. Give difference in origin and length of the right and left subclavian arteries.

Physiology.—Dr. H. B. Weaver.

1. In what (4) ways do peptones differ from albumins ?

2. What are the four specific actions of the pancreatic juice ?

3. What nerves modify the action of the heart, and how ?

4. How is the caliber of the blood-vessels regulated ?

5. What is the source of animal heat ?

6. Describe the mechanism of urination.

7. What are the properties and functions of nerves ?

8. Give origin, distribution and functions of the triacial nerve.

9. Draw a scheme of the conducting paths of the spinal cord.
   (a) Give course of anterior roots.
   (b) Of posterior roots.
   (c) Decussation of motor and sensory fibers.

10. Describe the corpora quadrigemina and give their functions.

Surgery—Dr. W. H. Whitehead.

1. Name varieties of ulcers. Describe and treat an acute ulcer.

2. What is an abscess, and what are the varieties of abscesses ?

3. What are the symptoms and what the treatment, constitutional and local, of burns and scalds ?

4. What are the symptoms of concussion and the treatment of compression of the brain ?

5. What is the cause, what are the symptoms and what is the treatment of cystitis?

6. In case of threatened death during general anæsthesia what measure should be adopted?

7. What are the symptoms of stone in the bladder?

8. What is hydrocele, the diagnosis, treatment and operation for the same?

Gynæcology, Obstetrics and Pediatrics.—

DR. J. M. BAKER.

Gynæeology.

1. What is meant by retro-version? by retro-flexion? Describe the various methods of treatment.

2. What are the indications for the use of electricity in gynæcology? Give the therapeutic effect of the positive and negative poles of the galvanic current. What is Ohm's law?

3. What are the causes, symptoms and treatment of pyosalpinx?

Obstetrics.

1. Describe the pelvis; give its diameters. Give the diameters of the fœtal head.

2. Give the etiology and treatment of eclampsia.

3. Give the causes of persistent occipito-posterior positions. How should such cases be managed?

4. Give the cause, symptoms, diagnosis and treatment of puerperal infection.

Pediatrics.

1. Give the definition, causes and pathology of acute anterior poliomyelitis.

2. Describe tuberculosis of joints and give symptoms and treatment.

3. Define hereditary syphilis, describe the principal symptoms and give the prognosis and treatment.

The Board of Examiners adjourned and left for their homes on the 30th. There were 21 applicants examined and licenses were granted to 14—just one-third failing to show a sufficient knowledge of medicine to fit them to practice among the people of North Carolina. As will be seen from the questions above, the examination was a very fair one. The usual 80 per cent. was required. The following are the successful applicants: T. J. Sevier, D. E. Sevier, W. L. Hilliard and J. P. Millard, of Asheville; T. E. Hartsell, of Concord; H. W. Carter, of Fairfield; John McCampbell, of Morganton; C. J. Sawyer, of Bellcross; B. R. Graham, of Wallace; E. A. Moye, Jr., of Greenville; W. P. Holt, of Willard Mills, and S. M. Mann, of Manteo, all these being white, and to C. H. Barnhardt, of Mt. Pleasant, and W. F. Fuller, of Reidsville, both colored. There are two more steps these should take—subscribe at once to the NORTH CAROLINA MEDICAL JOURNAL, which is published twice a month at only $2.00 a year, and attend the next meeting of the State Society at Winston and associate themselves with the representative physicians of the State. The JOURNAL makes a splendid premium offer this month, which may be seen on the second page of cover.

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Original Communications.

SOMETHING OF SURGERY UP TO DATE.

By CHAS. O'H. LAUGHINGHOUSE, M.D., Greenville, N. C.

My youth and inexperience make me diffident in attempting to discharge the duty conferred upon me; for anything like a complete report of surgical advance, made by even a competent reporter, would take more time than we could give this, the greatest and most progressive branch of our art.

I will attempt to give you at least

SOMETHING OF SURGERY UP TO DATE.

however, asking in advance that you throw the mantle of charity over all shortcomings, and trusting that the other papers of my Section, which will follow this, will bolster up my deficient efforts and, after all, make the report on surgery and anatomy an interesting one.

I will first ask your attention, in as few words as possible, to brain surgery, hoping to give a sufficient number of facts to show what has been attained in this progressive field.

Until recently the skull was regarded as a region, surgically speaking, so dangerous, that *dantes malto*, "Abandon hope all ye that enter here" might have been considered as an appropriate warning to those who desired to attempt an invasion of its contents. The relation of the functions of various portions of the brain and of operative possibilities on this part of the body have exercised a marked influence upon recent surgical practice, so that we can now, with almost absolute certainty, map out various portions of the cortical substance from the exterior of the skull.

For example, the fissure of Rolando, around which cluster so many important centres, can be localized externally with surprising certainty by lines drawn from stated points. Once the position of the fissures is obtained and the brain exposed, the latter can be faradized and the motor cortical centres located. A great deal of study and experimentation has been carried on along this line of late, and many things by enthusiasts have been put down as proven.

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*Read before the North Carolina Medical Society, May 15, 1895.

The following facts, from all the information I can gain, seem to be the larger part of what has been undoubtedly proven:

1. That when regions of cortex of brain of lower animals are irritated by mild electrical currents, *motion* is produced in portions of the body over which the irritated region presides.

2. That portions of the cortex shown to be closely associated with *motion* are known as the Rolandic region, which is composed principally of the convolutions separated by the fissure of Rolando as well as parietal lobule. The above region is subdivided into special centres, found out and proven thus.

Irritation of the parietal lobule and upper junction of ascending frontal and parietal convolutions produce in lower animals advance of opposite hind leg and flexion of thighs and toes, as in walking.

When the middle portion of the ascending convolution is irritated, movements of hand and arm follow. The lower portion of the same convolutions are in like manner shown to preside over movements of mouth, tongue and nose.

Coming posteriorly near the angular gyrus, irritation results in movements of eyes and eyelids, while still further down on the superior tempero sphenoidal convolution there is pricking of opposite ear, turning of head and eyes to opposite side and dilation of pupils.

Other regions, though irritable, are not connected with coördinated movements, while a large portion of cerebral cortex is insensible to faradization. These experiments teach us two facts:

1. That "motor activity," though present to a great extent in the so-called "motor area," is not entirely confined to this area.

2. That while each hemisphere is closely associated with the opposite half of the body, to a subordinate degree it also presides over the same side.

What has been said is all I can find positively proven concerning cerebral localization. There are a great many other probably soon-to-be facts, but as yet they are *sub judice*. Some of these are, in a few words, as follows:

1. That the brain of monkeys and other lower animals in the same class resemble the brain of man to such a degree that what was true of one is equally true of the other.

2. That both in man and lower animals the brain is so differentiated that certain areas preside over allotted functions, and that they are capable of being subdivided—this being especially true of motion and true also, but to a lesser extent, of the special centres.

3. That the brain has been mapped out into centres of motion, sensation,

sight, hearing, speech, smell and taste, and that they have been located as follows:

Motion.—The ascending frontal and parietal convolutions, their superior and the paracental lobule is known as the "Motor or Rolandic Region," and has been subdivided into fingers, hand, mouth, etc., every muscle and group of muscles being represented by a definite area in the cerebral cortex.

These conclusions are results partly of comparison experiments with animals and partly of pathologic research, and may be thus summed up:

The superior parietal lobule, when stimulated, causes advance of hind leg.

The upper portion of the ascending parietal lobule holds the complex movements of leg, arm and trunk.

The ascending parietal lobule holds individual and combined movements of fingers and wrists and also prehensile movements.

The posterior extremity of superior frontal convolution possesses movements which extend forward the arm and hand.

The ascending frontal convolution is the region in which is held the power of supination and flexion of forearm.

In the lower one-third of the ascending frontal convolution and at its junction with the ascending frontal and ascending parietal is stored motion of mouth and tongue.

The superior and middle, frontal and superior marginal lobule and angular gyrus possess movements of mouth, eye deviations, change of pupil and turning of head.

First temporal convolution, when irritated, causes turning of head, dilatation of pupil and pricking of ear.

Visual Centre.—Different localizers have by no means agreed as to many minor points concerning this centre, but the occipital lobe seems to have such a majority of supporters as to be deemed the accepted centre.

Auditory Centre.—Experiments made on lower animals, according to Hamilton, are far from satisfactory, but the position most agreed upon, according to the knowledge of the subject, is the superior temporal convolution.

Speech Centre.—There is no fact in cerebral surgery more generally recognized than a speech centre, yet it is not included among the centres proven undoubtedly. While localizers recognize the close relationship between the destruction of Broca's region and aphasia; yet they deny that, in the strict sense of the term, it is a proven centre, still we know, without any doubt, that when Broca's region is involved in any destructive process there is often right-sided hemiplegia with aphasia.

Tactile Centre.—There is no question about the cerebrum more undetermined and seemingly undeterminable than is this. Farrier and his followers locate the centre in the hippolampal region, but the majority of localizing specialists, Flaising among the number, believe that the cortical centres, or the field for motion and sensation, overlap each other, both occupying the Rolandic region.

From the above summary it is seen that in reality little is positively proven, yet the importance of these researches is undoubtedly great, for not only have they opened up a new field for experimentation and added greatly to our knowledge of cerebral surgical physiology, but they have aided us immeasurably in diagnosis and have been the basis for many brilliant operations successfully performed for localized growths, deposits and injuries of the brain.

Our medical journals are filled with operations justified by diagnoses which could not have been made but for what knowledge we have concerning cerebral localization. We have every right to expect a great deal more from it than we now possess. However, after referring to some few cerebral operative procedures, we will leave the brain to the wise handling of the next compiler of our surgical report.

Under the head of operations we will first look at craniectomy for microcephalus, which has been a subject of some interest for the past year, various journals having reported with both favorable and unfavorable results. A great deal of discussion has taken place on the future utility of this operation, and Dr. Karl Beck having studied the subject most thoroughly and presented it in the form of a very interesting and impartial article discussing both sides with equal justice, I deem it not amiss to quote his conclusions.

1. He believes craniectomy to be a justifiable operation and apt to be successful in cases of microcephaly, with idiocy.

2. That its success depends on the kind of microcephaly and the degree of idiocy.

3. That acquired and late forms of this disease give a better prognosis than congenital cases.

4. That the danger of the operation is not very great.

5. That the operation should be extensive, that is, the opening in the skull should be large enough to permit dilatation.

6. That the patient must be given a thorough pedagogic treatment afterward.

Trephining for brain affections is daily becoming more general. In fact, its field of usefulness is broadening so greatly that one cannot, in a report limited to twenty minutes, give any idea of its present position. I will confine my remarks under this heading to opening the skull for a very few diseases.

First, we will take encephalitis. For this disease trephining has met with some success, and so great a man as Victor Horsely strongly advises this treatment as a means of giving vent to inflammatory exudations, favoring it more strongly in chronic than in acute cases.

A case reported by Dr. Barker shows where an ounce of odorless pus was evacuated from fissure of Sylvius with good results. It is as yet too early to form positive opinions as to this mode of treatment, for there is little experience to guide us; but, to say the least, it seems rational surgery, for inflammation of the brain, like other portions of the body, is followed by exudation and suppuration, and the presence of pus within a cavity with no possible means of outlet like the skull, will surely cause rapid tissue change, with pressure symptoms in addition. This being granted, does it not seem reasonable that we should afford a means of outlet by trephining, opening the dura and draining?

When exudation, serous or purulent, occurs in a periosteum, we open it up and give vent to the fluid. So in inflammation of the brain, with serous exudation, future experience may show that it is wise to drain the exudate before it becomes purulent and causes irreparable damage to brain tissue. If we do not do this we still have some hope of giving relief, provided purulent infiltration becomes sufficiently localized to force an abscess, as cerebral localization has become well enough perfected to give us material diagnostic aid, as far as position of abscess is concerned. We can open this and drain with some expectation of success. When inflammation reaches this stage, according to the latest authority, we are warranted in practicing extreme trephining because its dangers are nothing to compare with leaving the abscess unevacuated, which, when left in this condition, will surely prove fatal.

Great advance has been made recently in surgery of lateral ventricles. Until of late it was believed that any injury to this part of the body was essentially fatal, even though this fact was disproved by the occurrence of some cases which recovered where the lateral ventricles have been opened by fracture.

Professor Keen has shown very clearly the fallacy of such opinions by puncturing lateral ventricles through the brain substance with accuracy, introducing drainage-tube into ventricles, allowing it to remain several weeks without inflammation of either brain or its membranes. He has even irrigated lateral ventricles from side to side after bilateral trephining without material discomfort to patient.

These facts teach us that we should not in fracture involving the ventricles give a patient up to die, but treat the case with the same antiseptic precautions we would have given it were there no injury.

Trephining for insanity, based upon focal symptoms, has met with some success during the past year, and many cases of interest have been reported, but time is too limited to give more than mere mention to this.

Dr. Keen, of Philadelphia, in a very interesting article on recent advances in brain surgery, gives some valuable hints which I will mention, then I will not tax your patience longer with this subject, but will ask you to listen to what is going on in the gall-bladder.

In discussing infectious diseases of the brain arising from middle-ear disease, Keen lays great stress on opening up the mastoid just over the mastoid antrum, which, if you remember, is a single cavity, about the size of a pea in the centre of the mastoid spaces. In perforating the antrum to evacuate pus, according to Treeves, the drill is entered one-fourth of an inch behind the orifice of the meatus and a little below the level of its upper wall, the instrument being thrust into the bone nearly parallel with the auditory canal with an inward, a little forward and upward motion. Keen prefers the antrum:

1. Because it has direct connection with the middle-ear, and therefore will be the first part invaded by the pus.

2. Because from the antrum you can more readily reach the mastoid cells, which are so often filled with pus. Having reached the seat of suppuration, he cleanses it, not by a simple washing only, but by wiping out the cavity thoroughly with soft antiseptic gauze. He prefers opening the skull for mastoid disease with the ordinary carpenter's sink instead of a trephine, condemning chisel and mallet, believing that the blows of the mallet produce a disturbance within the skull sufficient to diffuse the pus and cause damage to affected brain tissue. There is danger, also, of the chisel going too deeply and penetrating the lateral sinus.

Macewen recommends for opening mastoid spaces a rotating bar such as dentists use.

An interesting and useful anatomical point in regard to operations about the mastoid is the supra meatal triangle, called attention to by Dr. Macewen. The boundaries of this triangle are, the root of the zygomatic process above, the posterior border of the meatus in front, and a line joining the two behind. The value of this triangle is two-fold:

1. Just at the base of the triangle lies the antrum. If you perforate at the base you will reach it.

2. The sigmoid portion of the lateral sinus always lies back of it, and is therefore out of danger when a perforation is made at the base of the triangle.

Again, if you draw a line back of the triangle, parallel to its posterior border from the posterior inferior angle of the parietal bone to the apex of the mastoid process, this line will correspond to the axis of the sigmoid portion of the lateral sinus, or, as it is better called, the sigmoid sinus.

Leaving the brain, which I fear has taken up so much of your time as to render you impatient, we will turn our attention to some surgery which has a history not to exceed twenty years. I allude to surgery of the gall-bladder. Only a short time ago operations now successfully performed for diseased conditions in this region were unheard of and deemed impossible. But now, thanks to aseptic and antiseptic methods and that life-saving, time-saving, inegnious Murphy button, surgery of the gall tract has become an inviting and absorbingly interesting field. Though results are not perfect, still many glorious achievments have been attained and countless lives saved. The journals are fertile now with cholecystostomies–otomies, ectomies, entrostemies, etc; and even in the short space of twelve months great advancement has been made especially in technique.

From what I can gather the operations done on the gall-bladder up to date are as follows:

1. Incision of gall-bladder without further operative procedure, performed when the bladder has become gangrenous or surrounded by adhesions so extensive as to make it impossible to suture it to abdominal walls or anastomose it with any portion of the intestinal tract; or, where drainage of bladder is compulsory and you wish to use it as a canal in dangerous obstructive jaundice. By this method you may drain by the introduction of the tube into the bladder and packing it around with aseptic gauze, thus protecting the peritoneal cavity. A better method of drainage, however, is that described in the *Medical Record*, January, 1894, by Dr. John B. Murphy. He has invented a "button tube" drainage which has the advantage of—

(a) Being more quickly and easily inserted deep down into the abdominal cavity.

(b) Preventing any contact of bladder contents with abdominal viscera until sufficient adhesions have been formed to render leakage impossible.

(c) It leaves a long opening in the bladder when withdrawn, through which calculi may be extracted.

2. Cholecystendycis, or incision of gall-bladder with immediate suture and reposition into abdominal cavity, is another operation with a mortality of about 35 p. c. Though rarely used now, still it is worthy of mention, if for nothing else than to condemn it.

3. Cholecystotomy, or suture of gall-bladder to abdominal wound with secondary incision, is an operation done at two sittings. After adhesions have formed, which take generally from ten to fifteen days, the bladder is opened and its contents allowed to escape.

4. Cholecystotomy at one sitting or suture, with immediate incision, is a method where the whole operation is completed at one time. The opening being made into the gall-bladder as soon as it has been stitched to abdominal wound without waiting for adhesions.

5. Puncture of the gall-bladder is mentioned simply to condemn it. Even a needle puncture remains patulous, so this operation is on its face a dangerous one. Even if it were devoid of danger, it can do but little good except as a diagnostic step.

6. Cholecystotomy, or incising the bladder, removing its contents and suturing it to abdominal wall with extra peritoneal sutures.

This is a method seemingly not much in favor now. It was intended to replace cholecystendysis—diminishing the danger of this operation by having the bladder sutured extra peritoneal, so in case the suture should leak or break the bladder contents would not come in contact with the peritoneal organs.

7. Choledó lithotripsey, or crushing of gall-stones; stones, when impacted in duct, are sometimes crushed with the finger or a needle passed through the duct on to the stone, may break it in half, then, by careful manipulation, the stone can sometimes be pulled on through the duct into the intestine or back into the gall-bladder.

Cholecystectomy by means of Murphey's button is decidedly the most popular and most satisfactory operation for opening gall-bladder. Its advantages over all others is so patent that its use has become general, excluding, to a great extent, many other methods. It has the following points of excellence and superiority when compared with other operations:

1. Saving of time.
2. It is more easily performed.
3. It is devoid of the danger of leakage, as it gives firm, close and accurate approximation of gall-bladder to parietal peritoneum.
4. It leaves a large opening through which gall-stones can be removed.

Cholecystenterostomy, or connecting the gall-bladder with the intestine is a favorite operation, and when feasible, is preferred to the other methods, as it gives the system the necessary amount of bile. If pathological conditions require a cholecystotomy, the Murphey button method is preferable to most authorities. This button has doubtless come to stay, though it is a young invention, still it has saved many lives and much precious time.

Not only has it proved useful in gall-bladder surgery, but in intestinal anastomosis of various portions of digestive tract its field of utility has been great.

Speaking of intestinal anastomosis, Senn's plates deserve mention, as reports of cases successfully treated by them are constantly appearing in the journals. We will pass from this very imperfect report of the present state of gall-bladder surgery to what seems to be a most excellent operation for gastrostomy, known as Witzell's method.

Its advantage over other operations is the prevention of leakage through the gastric fistula. The principle of the operation is this:

After cutting through the tissues down to the stomach, the anterior wall of this organ is pulled out of the wound. Opened near the lesser curvature by an incision of one-fourth of an inch in length, a piece of rubber tubing two feet long is on hand, about one inch of which is slipped into the stomach through the wound, which it accurately plugs. This tube is now secured in position and a species of artificial œsophagus formed. This is done by raising a fold of stomach on each side of rubber tube with a series of interrupted Lembert sutures, on tightening which the tube is buried for about two inches of its length in the gastric folds. You can now put food into the stomach through the other end of the tube. Should the œsophagus again regain its function, as in cicatricial structure, the tube can be withdrawn without any after leakage and the fistula rapidly heals.

This lifting up of tissue around the tube as described, forms a kind of valve something like the ileo cæcal, which makes an efficient valvular defence against the outflow of gastric contents. Autopsies made several months after operation prove this fact.

Dr. Laughinghouse supplemented his paper with a verbal report of an operation for stone in the bladder. A little boy, about 11 years old, had come into his office suffering from retention of urine. On trying to insert the catheter it was found that an obstruction prevented. The stone seemed to be about the size of an egg. With the assistance of Drs. O'Hagan, Morgan and Brown he opened the bladder by a suprabubic operation and removed two stones and thought that everything had been removed, but, upon attempting to again insert the catheter, to their chagrin they found that it was not to be passed and that the same obstruction remained. The stone was so entirely encysted by the tissues that it had to be removed in pieces. The bladder was damaged badly and the incision made was rugged and it was feared that the patient would die from the shock or from peritonitis, but in a few days he was free from fever and did nicely with the exception of a purulent cystitis, and got well.

DISCUSSION.

Dr. Keen said he was very much interested in this paper. In trephining it was said that we must always think we have the thinnest possible skull. This quotation seemed indicative of the great fear that used to exist of wounding the membranes of the brain, and, while that might well exist in the days before antiseptic treatment, when a wound of the brain was so dangerous to the patient, in these days we have changed from all that. The introduction of antiseptic methods and the introduction of the flap method, instead of the old crucial incisions, have changed the whole aspect of intracranial surgery, and he did not hesitate to say, and he thought it would meet the approval of all present, that the brain should be treated with absolutely the same indifference that any other part of the body is treated; that incisions should be made with just as much readiness and the skull opened exactly as if it were any other part of the body. If pus collects in the abdominal cavity any surgeon would open the cavity in order to get it out, and there is no reason why the head should not be opened to let out pus, or for the removal of a tumor. The day is past when the brain was regarded as a land which must not be explored. He supposed that the commonest of all conditions that require the interference of the surgeon to-day in connection with the skull is fracture of the skull. In his day, as a student, it was thought that fractures of the skull ought to be almost absolutely let alone; but to-day, in fractures of the skull, no hesitation is had to trephining and lifting up the scalp. Trephining, it must be remembered, is nothing more than making an incision in the soft parts. The saw is used instead of the knife because the bone is hard instead of soft like the flesh. Where is the man who, if there was a case of suppuration of the femur or tibia, would not trephine the femur and tibia and let the pus out? In the skull exactly the same conditions require the same treatment. In fact, there was vastly greater need for an incision in the skull than in the soft parts, for the pus would probably be able to get out anywhere else than in the skull—in the thigh or forearm it could probably work its way out, but in the skull it is almost an impossibility physically, and therefore it is the duty of the surgeon absolutely in these cases to open the skull, let out the pus and to lift up the depressed fragments of the bone lest they should produce eventually suppuration, meningitis or epilepsy. A compound fracture and a simple fracture are exactly on the same level. A man who uses absolute asepsis or antisepsis can explore a simple fracture with but slight danger. Sometimes the best surgeon meets with a misfortune; but the danger of doing so compared with the danger of letting the patient alone, is as nothing. It must be remembered that fractures through the orbit, through the base of the skull, through the mouth, through the nose or through the ear, when the membrani tympani is ruptured, are just as truly compound fracture as a fracture of the vault that can be seen, and are even more dangerous because they are hidden. The most complete asepsis must be used as can be had. It is true that the mouth or the nose cannot be absolutely disinfected. But just as in ordinary drugs the effect is in the proportion to the dose given, so in a compound fracture the effect is in proportion to the dose of septic bacteria. As nearly absolute asepsis must be obtained as possible, and the results will be very much better. In fact, the whole aspect of the subject has been changed since the introduction of aseptic methods. In the mouth and nose the solutions of mercury or carbolic acid that would be used elsewhere in the body cannot be used, but thorough cleansing with a normal salt solution can be done. This will remove a great deal of gross dirt and very much of the infected material. This is to be followed with boric acid solutions. Thus a comparative asepsis will be obtained that would be followed in many severe cases by recovery.

Another subject of a great deal of interest in this connection, of which Dr. Laughinghouse spoke, was that of hemorrhage. In this the localization is very important. There are a great number of cases now on record in which a man having received a blow on the head has been stunned by the blow or fall for a time, and then recovered for a time his consciousness, which may last for a few hours or days, and in some cases even a few weeks, and then he relapses into a second state of unconsciousness. It must not be understood that this occurs only in cases of fracture. He had seen recently two cases in which there was absolutely no fracture. A blow on the head had caused unconsciousness for a time followed by a period of consciousness and then by a secondary unconsciousness. Now, this might be caused by the rupture of the middle meningeal artery. If the main trunk is ruptured or multiple small ruptures exist, there will be a large amount of blood effused very rapidly, and of course the symptoms of pressure will come quickly. It may be a small rupture that produces such an effect. The man is stunned by the blow, an artery is ruptured, a small amount of blood is poured out, which gradually accumulates, the patient being, however, conscious in the meanwhile; but when the clot has become large enough to produce pressure, the secondary unconsciousness comes on. In such cases trephining is our plain duty, and it should be done as soon as the diagnosis is made; if not, the patient will die in the vast majority of cases. There are 68 per cent. recorded of deaths without trephining and only 33 per cent. with trephining.

After the determination to trephine the question is as to the localization, which is of great importance to us. It is not always necessary to trephine on the same side of the skull that has received the blow or the cut, but it is often necessary to trephine on the opposite side. He related a case brought into the hospital a few years ago. The man had fallen on his head from a hay-loft and had two wounds in the scalp, one directly in the middle line and one a little to the left over the parietal bone. He was unconscious, and in that case he never recovered consciousness, because there were four ruptures and the blood had poured out so rapidly that there was not time for him to become conscious from the stunning before the secondary unconsciousness caused by the flow of the blood had come on. There was no need to use chloroform on account of his already being unconscious. He made an incision at both of these lacerated wounds, uncovered the skull and found no fracture at either point. The man was lying there perfectly relaxed, not moving hand or foot, and he concluded that there could be but one cause that produced such profound and persistent unconsciousness, namely, a rupture of the middle meningeal artery. The patient did not move either arm or leg, and therefore he could not tell whether the right or the left side was paralyzed. On examining the pupils, however, both of which were sluggish, he found the sluggishness of the left pupil somewhat more marked than that of the right. He concluded to trephine on the left side, and if the clot was not found then, to seek for it on the right. He trephined on the left side 1¼ inches from the external angular process on a line with the eye-brow. The instant the skull was opened an enormous clot of blood began to ooze out, and he found two ruptures in the anterior branch of the middle meningeal artery. The clot was very large, and on removing it he found the artery still bleeding; he therefore concluded that the posterior branch was ruptured as well, and he trephined the man a second time, finding two ruptures in the posterior branch. This case he brought before the Society, not because the man got well, for he did not, but because of the diagnosis, for, after all, most of us know what to do when the diagnosis is established.

He said that in his opinion diagnosis was far more important to teach than the treatment, because the treatment could be had from any text-book. He had performed not very long ago an operation for the removal of the gasserian ganglion in a case of tic douloureux. He had chiseled through the external table. Right at this point he desired to say that the chisel should not be used, but the *osteotome*, because its being wedge-shaped renders it unlikely that the end will be driven farther in than one wishes, while the chisel can go to any depth. He was very careful about striking the blows in the above-mentioned operation, but the chisel was driven into the brain to the depth of an inch. Instantly a furious gush of blood followed, showing that he had cut the posterior branch of the middle meningeal artery, and he had not yet turned down the flap. He rapidly loosened the rest of the flap, and on turning it down he found, to his dismay, that the anterior branch of the middle meningeal was also ruptured, because it went through in a canal in the anterior inferior angle of the parietal bone. He put two fingers on the ruptured arteries until he could get a curved Hagedorn needle. An assistant controlled the anterior branch and he encircled the posterior branch and then the anterior with a ligature. He was glad to say that the patient made an uneventful recovery in spite of the great loss of blood he had from this untoward accident.

Dr. Bahnson described three of the last five cases in trephining that had occurred in his practice. The first was for a slightly penetrating wound, the result of a blow on the left of the middle line over the parietal bone. The boy was about 21, and he informed the physician that he had not been stunned and did not feel sick in any way. He had walked home, a mile or two, and sent for a physician. Nothing of moment occurred, and he seemed so well that the physician left him until the following evening. The only thing that the young fellow complained of was a paralysis of the flexors of the right forearm, and, with the exception of a very small puncture in the skin, there was nothing to be felt. An opening not exceeding one-third of an inch in diameter was made in the skull and a wedge-shaped spicule of bone was found driven down upon the dura mater. It was necessary to enlarge the opening in order to get it loose from its attachments. There were no brain symptoms, only localized paralysis. He entertained no doubt but that he would have suffered from it had it not been attended to.

The second was that of a child, who fell from a loft, striking on her head. She was semi-conscious and sometimes uttered a word or two in a far-off kind of way. There was no involuntary action of the bladder and paralysis of the sphincter muscle, and no nausea or anything of that kind. There had elapsed three or four days, and, on account of the general sluggishness of the patient, they decided to operate. A very large clot of blood was found under the scalp on top of the head, with a fracture parallel with the middle line of about three inches—nothing else; no depression, absolutely none.

But they decided to cut through, and there was found an immense clot of blood between the dura mater and the skull, which was removed with the finger. The pressure being removed, the child made a perfect recovery, and is well to-day.

The third case was a young boy who had been struck by the hoof of a horse and no external wound, even, could be discovered. The boy was bright and lively, but on palpation a slight depression was noticed. An incision was made, knowing that it could do no harm, and a slight depression was found in the outer table. He trephined alongside the depression, intending to raise up the fractured spot, and to their surprise they found enough of the internal table broken and split in every direction to cover the palm of the hand, some sticking straight down and pressing upon the dura mater. It was an extensive fracture. The little fellow could not be kept in the house and was soon well.

He wished Dr. Keen to emphasize several points—that it is a manifest duty, whether there be an external opening through the scalp or not, in a case of brain injury, to cut down and make an ocular examination of the skull. If he finds a fracture without a depression it would probably be a matter to wait upon; if there is the slightest evidence of any, if there are any brain symptoms, or local paralysis, or any conditions which might be caused from pressure due to the effusion of blood, he ought to trephine forthwith, and not to treat it as heretofore; also that it is very hard to injure the membranes of the brain with reasonable care in operating; it would be very difficult to injure even a sinus; and with ordinary care there is nothing for a man to dread in trephining. It is better to go into the scalp and relieve the brain than to wait until it might be too late to do any good by the investigation.

In answer to Dr. Bahnson, Dr. Keen said that he especially commended what Dr. Bahnson had said in reference to operations of the brain No surgeon who will take care as to antiseptic methods and will shave the head and disinfect it thoroughly, need be afraid of an incision through the scalp. He had seen case after case which from the want of such an incision the fracture had been overlooked. The only way to do is to cut down and find out when we do not know, and with strict asepsis no harm is done. If there be a fracture it is of the utmost importance that it should be known as early as possible. He agreed with Dr. Bahnson mostly in reference to the method of trephining. A surgeon ought to be careful when trephining, but with the ordinary care of the ordinary surgeon he did not believe that there was danger of wounding the dura. Should the instrument go into the dura, it is not at all necessarily a vital point. Of course no one should trephine over a sinus if he can get alongside of it. He always got as far away from the sinus as possible, but if necessary he would not hesitate to go near it or even over it. He had in several instances trephined near the sinus and separated the dura until the whole of the sinus was free from the skull for several inches.

If we wait to trephine until symptoms occur, infection has probably already taken place. He operated as early as he could in all cases. He thought that in certain cases no one could absolutely determine the existence of a fracture or fissure—it can simply be suspected. If he found a fracture with brain symptoms, or even a fracture without cerebral symptoms in which there was much depression, he would certainly make an incision through the scalp.

Dr. Hodges desired to express his interest in the subject, and to call the attention of the Society to cerebral surgery in its relation to traumatic epilepsy, and desired to ask the Society to bear the subject in mind during the year, and, if occasion should present itself, to operate and let the world know the result. As all know, it is occupying a prominent position in the profession.

He was glad to see Dr. Keen present, and said that he had had the pleasure of seeing one of his cases of this character very recently. He himself had operated upon five cases of traumatic epilepsy with the hope of curing them. He considered this treatment as worthy of the attention of physicians and surgeons everywhere. He was sure that all could do the operation as recommended by Dr. Keen, though it was another question about going down into the cerebral mass, though that was indicated at times.

The five cases presumably due to traumatism upon which he had operated during the past year had given him great cause for encouragement. While he knew the statistics on this subject, still he believed that there are great hopes along this line, and he was especially desirous that the surgeons of this Society, when they have cases of epilepsy probably due to traumatic injury of any kind, will investigate and see what can be done.

He mentioned one of the five cases in order to show that, although the time of injury had been very distant, still there are hopes of recovery. This man was fifty-six years old when operated upon. He was in the late war, and in the third days' fight at Chancellorsville a ball struck him in the head and he fell unconscious, and the battle and the subsequent events were of no importance to him, as he recollected nothing afterwards. For a time his mental faculties were disturbed and one year from the injury he commenced having epilepsy, and up to several months ago had had epileptic fits almost constantly. He was operated on simply with the possible hope that the epileptic attacks might be checked. Only a slight injury was found on the internal table, but the patient was so relieved that he has only had three attacks since. On the afternoon of the second day after the operation the man began to recall the scene of the battle which he had been in.

Dr. Hodges said that if he had not related it with so vivid an interest and taken such pleasure in narrating it to him, he would not have believed but that the man had remembered it before and was faking. It had been blotted from the man's mind for all those years. The man is now at work for the first time in ten years. Trephining for epilepsy offers great hopes, in his opinion, for the future, as a source of the removal of at least some of the causes of this disease, especially where it is possibly due to traumatism.

Of these five cases operated upon, three have been benefited and two have not; but that seemed to him some index of what might be expected in the future.

Dr. Murphy related a case that was brought to the State Hospital in Stanton, Virginia, when he was a physician there. It was a case of depression on the side of the head, and they started to trephine. The bone was removed and there was no evidence of any pressure on the internal table. About that time politics got into the Institution and the administration was removed before the man recovered from the operation. After the new administration came in he was so much improved that he was discharged as recovered. He went home and remained several months and killed his wife and two children and was immediately returned to the Institution. In a discussion in the American Medical and Surgical Association on this subject, a number of cases were given, and to his recollection there was not a single successful case, and that has given it such a backset among societies and hospitals that it is no longer practiced. He did not remember the particular matter for which trephining was done in any case, but he knew that the result was the same in all. There was no permanent benefit. All his cases were in insane patients.

He did not wish to discourage anyone in regard to trephining. His experience had been limited.

Good common-sense is the greatest qualification in the practice of medicine. Engraft upon this a medical and surgical knowledge of disease, and mistakes will be infrequent. If rectal trouble of a decided type exists, before operating it should be determined that disease of a more serious nature does not exist. It would be very foolish and unsurgical to operate upon a person for hemorrhoids, who also had a cancer in the upper rectum. To operate for fistula in ano in a patient who also had stricture in the rectum would do but little good if the stricture was not first attended to. The man who does rectal surgery should by all means have served his time as a general practitioner, and he certainly should be acquainted with general surgery.—*Mathews' Medical Quarterly.*

GUM BOIL.—A periodontitis may frequently be aborted by painting the inflamed gums several times a day with a mixture of tincture of iodine and tincture of aconite, one drachm each, and chloroform and tincture of benzoin, each fifteen minims.—*Practitioner.*

Society Reports.

RICHMOND ACADEMY OF MEDICINE AND SURGERY.

August 13, 1895.

Dr. V. W. Harrison, First Vice-President, in the Chair.

Dr. Landon B. Edwards read a paper on the Diagnosis, Special and Differential, of Cholelithiasis. Stone may sometimes be formed in the liver itself. The position of the gall-bladder varies with that of the liver. It can be recognized by palpation. Cholelithiasis is rare in children under 12 years of age, becoming more frequent as age advances, and being more common over 30, and in women. It is comparatively frequent in the insane.

The characteristic symptoms suggesting gall-stone are, multipara seized with a grinding pain radiating over the whole body. There are perspiration, retching, vomiting, dyspnœa, pulse lessened in volume, expression of pain, no rise in temperature. The symptoms do not intermit, and pain is not relieved unless the stone passes. It lasts two or three days and leaves soreness. Ease is brought about through a form of pressure paralysis. Jaundice is not always present, but may occur gradually from occlusion. Mahogony urine may be present. The flow of bile being prevented, the skin becomes darker and darker, vomiting ceases to be bilious, stools become pasty and distension of the gall-bladder by mucus may occur, simulating floating or displaced kidney.

Cholelithiasis is diagnosed from *malaria* by the mild fever, scarcely jaundiced hue, chills, etc.

From catheterization.—The chills may become rigors, the fever rises, pulse slow—40 to 50—irregular and not in keeping with the fever.

Tumors, especially malignant pancreatic, and pancreatic stone.—Hemorrhages from the stomach, bowels, etc., obstruction from the common duct, damming of the fluid in the gall-bladder and ducts, producing jaundice. Indigestion of fat is present in pancreatic troubles.

Empyema of the gall-bladder, by the history of chills, fever, etc., with liver trouble.

Adhesions of the gall-bladder may so form as to cause discharge of bile into the duodenum direct, and there may be no suspicion of stone.

Symptoms of typhoid and other fevers and of malignant and benignant tumors are simulated by stone.

It is said that when the stone passes from the cystic to the common duct, pain is lessened, and as soon as the passage occurs, mucus begins to be dammed into the body of the liver, causing its enlargement. This is diagnosed from *hepatitis* by less pain in the latter.

Heredity may lead to differentiation of stone. It is seldom that repetitions of hepatic colic do not occur.

Operations for removal should not be performed unless the typical symptoms are present. Cases occur more frequently than is supposed giving rise to symptoms elsewhere.

There is no medical treatment efficient for the disintegration or removal of gall-stone. The indication is to relieve pain, and for this the best agent is by far hyoscyamine.

DISCUSSION.

Dr. Hugh M. Taylor quoted Robson, who lays stress on the characteristic suddenness of the paroxysmal pain. Vomiting may be continuous or paroxysmal. In some instances pain is referred to the left shoulder; often, above the umbilicus, differing from that of appendicitis. Subsequent attacks may be from the same stone. The direction of growth of the tumor is diagnostic, being obliquely toward the umbilicus. It may be enormous, sometimes, then, being mistaken for ovarian tumor. Distension of the gall-bladder without jaundice, means obstruction of the cystic duct, as by enlarged gland stricture of stone. Sometimes a diagnosis may be made by the presence of stone in the fæces. Hemorrhage, when present, is due to poisoning incident to cholœmia. In this latter we have continuous jaundice, which means neoplasm of the duct, or head of the pancreas. Stone, by its change of position, etc., will allow the escape of some bile, jaundice accompanying it being thus intermittent.

The question of peritonitis is important. A stone near the papilla is a foreign body, and as such it irritates and leads to the establishment of peritonitis, which may become purulent. Chills, fever, sweats, etc., occur here. Inflammation may result in perforation of the gall tract, setting up peritonitis thus. From malaria differentiation is sometimes impossible. Dr. Taylor said he could recall cases in his own practice in which diagnose was only made by the autopsy.

Solvents are myths, and the only medical indication is to relieve pain.

Dr. J. S. Wellford reported two cases of cholelithiasis. Most cases, said he, of gout commence with violent pain, especially in the right hypocondriac region, and this should be borne in mind in diagnosing gall-stone and appendicitis.

WINTER COUGH.—*Lippia mexicana* is almost a specific in the hoarse, barking winter cough without secretion, so common in northern climates.—*N. Y. Medical Times.*

Selected Papers.

THE TREATMENT OF TYPHOID FEVER BY GUAIACOL.

By A. P. Hull, M.D., Montgomery, Pa.

That typhoid fever is so universal that it usually attacks persons in the prime of life, endowed with the powers of resistance against disease, and yet with a mortality too high to be satisfactory, is the excuse I have to offer for reading a paper before the Society on a subject so threadbare as this. The symptoms require no description; the question of burning interest to us is, What can we do to reduce the mortality ?

During the months of September, October, November and December, 1894, and January and February, 1895, I had under treatment 32 cases of typhoid fever, and in a majority of these cases used a plan of treatment that was so entirely satisfactory that the results seem to justify reporting. These cases were not confined to any one locality, but scattered through a village and over a valley of considerable extent. While we have sporadic cases of typhoid fever every year in this valley, about every decade, especially after a very dry season, we have an endemic like this, until the disease has become a curse and dread to the people of this community.

If typhoid fever can be almost blotted out by having an uncontaminated supply of drinking-water, as is claimed in some European cities, then the water in the rural districts must contain the bacillus typhosus, although examinations very often give negative results.

The first 11 cases were treated medicinally with nitrate of silver and quinine, given continuously from the beginning to the end of the disease. Of these 11 cases 2 died.

Having 2 cases just beginning in the family of Mr. T., whose son had died, I decided to treat them with guaiacol internally and externally.

These 2 cases, with all the others following—19 in number—were treated with guaiacol internally and externally, and an occasional $\frac{1}{10}$ grain dose of calomel, three or four times a day, until slight purgation took place, when it was stopped, but resumed again, unless the patient had three or four loose passages every twenty-four hours. Along with this the bowels were frequently washed out with large douches of warm, soapy water, or, if the fever was high, cool water, which was always agreeable and gave comfort to the patient. The guaiacol was given in from $\frac{1}{2}$- to $1\frac{1}{2}$-drop doses every two hours, according to the tolerance of the patient for the drug night and day. The temperature was controlled by the external application of guaiacol and cold sponging. The external application of guaiacol will lower the temperature in about thirty minutes, and is preferable to the cold bath, as it is equally efficacious and can be applied where the latter is not practicable. The effects will last from three to four hours, but the amount should be small at first (from 5 to 10 drops), and gradually increased, as it is liable to give the patient a chill. The largest dose used at any one time was 20 drops. As in the case of any other drug, one person may require more than another, but patients become susceptible to its influence and the effects are greater with each application.

Outside of the chills, which occurred with the larger applications, I observed no deleterious effects from its use. The chills can be avoided by a careful application of the drug, the temperature not being reduced below 100° F. The drug was applied over the abdomen, which was first washed with soap and water and dried. The guaiacol was then slowly dropped on the parts, carefully rubbed in, and covered with oiled silk.

The shortest duration of any one of these cases was fourteen days, the longest twenty-four, and the average between nineteen and twenty days.

I have always been well satisfied heretofore to see typhoid patients get rid of the fever in twenty-eight days, and many of them, even uncomplicated cases, still later; therefore the early convalescence in these cases—the gain of a week—was not due to accident.

The diet was the usual liquid diet—meat broths and milk, the latter generally diluted. Stimulants were used when indicated, but were not required to any great extent. The highest temperature reached was 105.4° F., and most of these patients, at some time during the disease, reached a temperature of 104° F., thus showing the fever to have been of some severity.

Convalescence was most rapid in the cases where treatment was most promptly applied.

Now, I realize that this number of cases is not large enough to demonstrate anything positive or to draw any absolute conclusion in regard to the treatment of typhoid fever, as you might have this same number of cases and give them very little, if any, medicine, and they would all get well; yet these patients, during an endemic that was sufficiently virulent, all recovered so much better and earlier than any same number treated before, being practically well a week after the fever had left them, that it was evidence to my mind that the guaiacol had some value in modifying and cutting short the disease.

Many of the symptoms that the 11 cases before had, and that we usually have, were slight, or, perhaps, entirely absent. Tympanites and delirium were rare. The tongue was generally moist, and the diarrhœa did not assume that uncontrollable character so often found.

That typhoid fever is caused by a specific germ—the bacillus typhosus—is now admitted, though their presence is sometimes hard to prove. The activity and life of this bacillus end at the latter part of the second week from the initial symptoms of the disease; but about this time the necrotic and sloughing process of the mucous membrane and Peyer's glands takes place, leaving what is equivalent to an open wound in the intestinal tract.

From this time on the symptoms are kept up by putrefactive bacteria, especially the bacillus coli communis, which becomes virulent during the latter stages of the disease.

We cannot put each one of the open wounds in an aseptic condition, as a surgeon would do, but we can, I think, make the intestinal tract less habitable for micro-organisms, and the clinical history of these cases seems to me to prove the anti-fermentative action of guaiacol and other antiseptics in the intestines.

The phenol group undoubtedly occupy the first rank as germ destroyers and germ poison neutralizers outside of the body, and during absorption, as they are never found free in the blood, and combine with albuminous substances, especially with the most reactive of these, the toxic albumins, the products of microbic life, forming compounds, probably non-toxic. They undergo rapid oxidation in the system, and can be found in the urine. They, therefore, would not only destroy the disease germ in the intestinal tract, but would effect a rapid elimination of the toxic albumins from the system.

From my observations in these cases the following conclusions seem justified:

1. That the antiseptic treatment of typhoid fever is a rational treatment.
2. That guaiacol is a safe remedy in typhoid fever, and prevents the toxin poisoning of the later stages due to the bacillus coli communis and other putrefactive germs in the intestine.
3. That guaiacol will lower the temperature in typhoid fever, when applied externally, and, with ordinary care, can be used with safety.
4. That typhoid patients do better by keeping the bowels acting up to a certain point, rather than checking them, and will derive comfort and benefit from daily douching of the large intestine with warm or cool water.—*Therapeutic Gazette.*

MORPHINE HYPODERMATICALLY.—It is necessary, after giving a hypodermatic injection of morphine, to maintain perfect silence in the room where the patient is lying. Morphine, far from suppressing sensitiveness, like chloroform, rather tends to exalt the excitability, and particularly the liability to disturbance from slight noises. The failure of morphine injections to produce sleep is, in the majority of instances, due to neglect of this simple precaution.—*Lyon Medicale.*

NORTH CAROLINA MEDICAL JOURNAL.

ROBERT D. JEWETT, M.D., EDITOR.

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Editorial.

Bicycle Riding.

This mode of locomotion, which was started a few years ago as a pure and simple sport, has been rapidly developed into a necessity to the public—not that we *could* not do without the bicycle, for as we did without it once, so we can again—but it is a necessity in the same sense as the telephone and other such inventions. From the old-time buggy-wheel affair, with its wooden spokes and iron tire, which rattled down the streets like a run-a-way express wagon, the wheel has passed through the several stages of evolution until it has attained the high degree of perfection we see in the modern spider-web wheel, with its ball bearings and pneumatic tires, which enable the rider to spin along at a rate of twelve or fifteen miles an hour without jar or noise and with a minimum of exertion.

Is it any wonder that the desire to mount the silent steed has swept over the land like a great tidal wave until it has seized upon all classes and conditions of people? The old man and the matron, the young man and the maid, the rich and the poor, the high and the low, the professional man and the laborer, the healthy and the sick, we see them all spinning along the streets and boulevards of the city and along the pikes and by-paths of the rural districts, casting aside all care and worry, drinking in the life-giving oxygen, their faces radiant with pleasure, as they enjoy what may well be called the poetry of motion.

Numerous articles have appeared from time to time in the medical and lay papers, some of which seem to us to have been written from a prejudiced standpoint. In view of the wonderful popularity of the wheel, it is but right that its effects on the people should be considered. How will it affect the health and the morals of those who ride? As physicians we are bound to give attention to the former. It is the tendency of modern civilization to exercise the brain and not the body. The business man boards a crowded car and rides to his office, where he keeps himself confined until it is time to leave for home; the women pass days at a time in ill-ventilated houses, the atmosphere of which is contaminated by sewer gas, and when they do go out wrap themselves in furs and ride in close carriages, if it be winter, and imagine they are taking exercise! With such sedentary habits is it any wonder that nervous and digestive troubles are so common? Men join gymnasiums and women physical culture classes, but they soon look upon this as an irksome duty and abandon it. Walking has but little attraction. Something is needed to draw these people into the open air, and from personal experience we know of no form of exercise so gentle, so universal and so peculiarly attractive as bicycling. The opposers of the exercise may be answered, we feel convinced, by the assertion that it is the abuse, and not the use, of the bicycle which causes injury. The person who wishes to ride should find out from some one qualified to judge, what would be the abuse of the wheel in his particular case, and then should avoid that abuse. The extreme stooped position is an abuse with all riders, and is unnecessary even in hill-climbing. All speed of over eight miles an hour may be an abuse with one rider, while a fifteen-mile gait may not be with another. One may safely ride twenty-five or thirty miles, while another should not ride more than five or six, or even two, without resting. Each rider must have rules for himself. It would be an abuse of the wheel for some persons to attempt to ride at all. Let the bicycle be ridden as it should be and it will do good to the healthy and to the invalid.

There is no more reason against a woman's riding a bicycle than against her swimming. From an anatomical standpoint, it would be better adapted to women than to men. From the standpoint of experience there is every reason for her indulging in the sport. Dr. Charles R. Townsend has studied the effect of the bicyle upon women based upon the experience and statements of eighteen lady riders and physicians. His conclusions are "that bicycling is beneficial to women, not from any special effect upon the pelvic organs, but because it is an agreeable, healthful form of exercise in the open air, a form which exercises the whole body, and indirectly benefits special conditions. And the converse of this holds true, that, as a general exercise, bicycling is not hurtful to the pelvic organs, even when these are affected, unless the disease is so acute that any exercise as great as this is contraindicated."

Prizes.

Members of the Society will bear in mind that there are two prizes offered, neither of which has been awarded as yet.

The Duffy Prize is Fifty Dollars, by Dr. Francis Duffy, of Newbern. There has been a change in the conditions governing this prize which we give in Dr. Duffy's own language, to wit: "Fifty Dollars for the best article on *any subject pertaining to medicine*, of such a character as to advance our knowledge of useful facts not hitherto published. This may embrace either original observation of the writer, experimental or otherwise, or the presentation of well-known facts in such relation as by analogy or logical inference to lead to new and useful conclusions."

The North Carolina Medical Journal Prize is Fifty Dollars, offered by the Editor of this JOURNAL for the best essay on the History of Medicine and Surgery in North Carolina. This is a difficult subject to do justice to, we know, for there are few published data to build from. There is one particular characteristic that has always belonged to the profession of this State, that of keeping their work and their thought to themselves. It is this that makes it so hard now to ascertain just what North Carolina has done in advancing the practice of medicine and surgery, and it is this lack of zeal and concern for the honor of the State Profession that this JOURNAL is so desirous of overcoming.

We hope that worthy essays upon both subjects may be presented at the next meeting of the Society in Winston, and that the men of the present generation will present their work through the columns of the JOURNAL that the world may know of it and that some future historian may have some data upon which to work when he desires to write a History of Medicine and Surgery in North Carolina.

Reviews and Book Notices.

The Care of the Baby. A Manual for Mothers and Nurses, Containing Practical Directions for the Management of Infancy and Childhood in Health and in Disease. By J. P. Croger Griffith, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania, etc., etc. Octavo, pages, 392, cloth. Price $1.50. W. B. Saunders, Philadelphia, 1895.

Many of the diseases and much of the mortality of infancy and childhood are due to a lack of care of the baby, either through negligence or lack of knowledge on the part of the mother. The doctor gives a few general directions in regard to rearing the child, and the mother soon forgets what he said and follows the rules of tradition and goes to the advertisements in the daily papers for advice. How much better if she is provided with a reliable book written in a style she can understand, and which gives her detailed instruction in regard to the daily management of her baby. Such a book we have before us. There is much in it a mother should not attempt to make use of, except under the direction of a physician, but the subjects of hygiene and diet are clearly discussed and will be of much service to mothers. We would advise them to secure the volume and study well its teaching.

A Guide to the Aseptic Treatment of Wounds. By Dr. C. Schimmelbusch, Atsistant in the Royal Surgtcal Clinic of the University of Berlin. Preface by Professor E. von Bergmann. Translated from the Second Revised German Edition by Frank J. Thornbury, M.D., Lecturer on Bacteriology University of Buffalo, N. Y. With forty-three illustrations. G. P. Putnam's Sons, New York and London, 1895.

We have in Dr. Schimmelbusch's book a satisfactory and very thorough discussion of the subject of antisepsis. Methods of disinfection of nurses, patient and physician, and the sterilization of dressings and instruments are described in detail. The technique of an aseptic operation in the von Bergmann Clinic is described, and does not differ materially from that in the hospitals in this country. It is an instructive work and is safe to follow.

HÆMORRHOIDAL DISEASE.—The form of piles characterized by sessile granulations which bleed easily, is best treated by the very old method of applying nitric acid. Introduce a speculum, dry the parts with gauze and touch the whole granular surface again and again with a bit of cotton moistened with the acid, but containing so little that it will not run over the parts not diseased.—*Medical Brief.*

Abstracts.

THE PARASITE OF MALARIA.—This was the subject of the last Hunterian Oration, delivered by Dr. P. Manson, who has had a large experience of tropical diseases in China. Malaria is in the aggregate more destructive than tubercle, and claims six times as many victims as cholera. The specific organism of the disease was discovered by Laveran about fourteen years ago. It is polymorphic, occurring in the blood in very numerous and varied forms, most if not all of which may be classified under certain leading types: (1) free spores and free sporulating bodies, often having the outline of a diverging rosette; (2) small unpigmented spi- and intra-corpuscular bodies; (3) large pigmented intra-corpuscular bodies; (4) intra-corpuscular rosette bodies; (5) crescentic bodies; (6) various forms derived from those already mentioned; (7) flagellated bodies and free flagella; (8) bodies which are probably degenerate stages of some of those already enumerated; (9) pigmented leucocytes. These are phagocytes which have ingested the particles of pigment set free when the rosette body falls to pieces and this process of pigment inclusion can often be witnessed. All these various bodies are but different stages in the life of a sporozoon. The best explanation of their mutual relationship is that supplied by Golgi, who considers that the free spores are the first stage, and that they, invading the red-corpuscles and nourishing themselves on the hæmoglobin, grow into the larger pigmented intra-corpuscular forms. After a time these segment and become the rosette bodies, which presently fall to pieces and liberate spores, to start a new generation. The flagellate bodies orignate either (1) from certain of the large intra-corpuscular pigmented bodies, which, having escaped from the corpuscles, after a time throw out flagella; or (2) from the crescentic bodies which can be often seen under the microscope to change into oval and spherical bodies, and finally to throw out flagella. There are believed to be at least two leading types of the malaria organism, the benign and the malignant, differing both in their figure and in their pathological effects. The former never give rise to the fatal pernicious fevers, but only to the mild tertians, quartans and double tertians, called quotidians; found both in temperate and in warm climates. It appears in the peripheral circulation in all its stages of small intra-corpuscular amœboid body, large pigmented form, rosette and flagellated body. The malignant forms produce the dangerous remittents, quotidians and tertians of warm climates. They appear in the peripheral circulation chiefly (and sometimes only) as the small spi- or intra-corpuscular non-pigmented form and are frequently ring-shaped. The rosette or sporulating bodies, and the pigmented intra-corpuscular bodies of the malignant type are very rarely obtained from finger-blood. These stages of this type are passed in certain viscera, such as the spleen, brain, etc., and the organisms can be obtained by aspirating blood from the spleen at the beginning of a febrile rigor. The special virulence of this type seems to depend on its habit of accumulating in the viscera quite as much as on the pyrogenetic toxine which it is supposed to liberate. A principal and characteristic feature of the malignant parasite is the crescent-shaped body, a form which is usually present in the finger-blood when the infection is of some standing, and especially when cachexia is marked.—*Lancet.*

CONSTIPATION, BIG-BELLY, AND DILATATION AND HYPERTROPHY OF THE INTESTINE.—In an infant improperly fed the abdomen becomes distended by flatulence; the belly is tense; the attack ends, as a rule, in diarrhœa, and the belly subsides. But after two or three such attacks the subsidence is not complete, and the belly remains big, tumid and flaccid. Marian (*Rev. des Mal. de l'Enf.* February, 1895) believes that the condition is due to a chronic gastro-enteritis, and that the bigness of the belly is produced by an actual overgrowth in length of the intestines rather than by mere distension of the stomach. The colon is usually much distended, covering up the stomach, but the small intestine may not be notably dilated after death, and, as a matter of clinical observation, the abdomen does not give the sensation of coils of intestine distended by flatus, but rather of a bag of big worms. Dilatation of the colon is found also in those cases of obstinate constipation, which are associated apparently with a slight malformation of the sigmoid flexure. This is an extra length and extra folding within the pelvis, to which Jacobi has called particular attention on many occasions, and last in his address before the International Medical Congress at Rome. Marfan (*ibid*, April, 1895) has republished some drawings from the cadaver made by Bourcart for a Paris *Thèse*, 1863. The normal arrangement appears to be as follows: The descending colon, when it enters the iliac fossa, bends so as to reach the left sacro-iliac articulation; it then crosses more or less of the cavity of the pelvis from left to right, and finally bends backwards, downwards and inwards to open into the rectum. Bourcart distinguished three types of abnormality—(i.) the ascending, in which a coil rises upwards out of the pelvis; (ii.) the transverse, in which the natural coil across the pelvis is exaggerated so that two sharp kinks are produced; and (iii.) the descending, in which the colon passes down deeply into the pelvis and then ascends, finally doubling downwards again to open into the rectum, thus producing two sharp kinks. When one or other of these abnormalities exists, the fæces are retarded, the more fluid parts are absorbed and the fæces rendered hard. Such children may pass only small rounded masses, "like marbles," or large fæcal masses, "like a grown-up person." The pain of passing these motions, which is often aggravated by the existence of fissures, and excoriations of the anus, causes the child to refrain from yielding to the desire to pass a motion, and the constipation is thus made worse. When the fæces accumulate into small, marble-like masses, they appear to determine with great readiness a colitis, which causes tenesmus and a frequent passage of small quantities of mucus, a condition which may be called diarrhœa by the mother. Marfan suggests that the chronic obstruction of the sigmoid may result ultimately in the enormous dilatation of the large intestine which has been described under the name of hypertrophy of the colon. Careful attention to diet, to ensure adequate digestion and absorption, and the systematic use of small enemata, appears to be the best form of treatment.—*Practitioner.*

INFECTIVE ULCERS OF THE CORNEA AND THEIR TREATMENT.—It has recently been claimed that subconjunctival injection of mercurial sublimate will arrest many infective processes in the eye. Bach, from a number of carefully conducted experiments, concludes that this claim cannot be substantiated with regard to infective ulcers (hypopyon ulcers, serpiginous ulcers). He produced such ulcers in both eyes in a large number of rabbits by inoculating the cornea with staphylococcus. One eye was then treated by injection and the other by ordinary means; he found that the healing of the ulcer was actually retarded by the mercurial injections. By other experiments the author shows that, contrary to the opinion generally held, the contents of the aqueous chamber in hypopyon ulcers do not contain bacteria, and he believes that the iritis or cyclitis which occurs in these cases is due to irritating properties of the secretion formed by the bacteria, and not to their actual migration. The effect of irrigating the ulcer with various substances was tried; the mercury perchloride here also proved ineffectual. The most efficacious was the oxycyanide of mercury, but it caused considerable irritation. The author recommends atropine, irrigation with saline solution, and the actual cautery if these measures are ineffectual. —*Arch. f. Oph.*, 1895, i., 56.

Recent Advances in Cerebral Surgery.—Von Bergmann (*Centrabl. für Chirurgie*, No. 27, 1895), at a recent Congress of the German Surgical Society held at Berlin, brought under notice certain advances that have been recently made in the department of cerebral surgery. In cases of tumor of the brain surgery has of late done very little beyond facilitating a correct diagnosis, and rendering operative interference less dangerous. In Jacksonian epilepsy surgical treatment is usually followed by relapse, and can effect a certain cure only in those cases in which the convulsions are due to the compression of a circumscribed cortical motor centre by a tumor, as, for instance, a cyst of traumatic origin. On the other hand, very decided progress has been made in the operative treatment of different forms of intracranial suppuration of otitic origin, such as cerebral abscess, epidural suppuration, infective thrombosis of the lateral sinus and lepto-meningitis. The most dangerous forms of chronic aural suppuration, which is usually excited by a collection of cholesteatoma in the interior of the ear, are indicated by intercurrent acute and subacute attacks, with fœtid discharge, and by the presence of polypoid granulations on the tympanic cavity and the auditory meatus. The extension of the inflammation through the thin and carious tegmen tympani sets up pachy-meningitis, which in its turn gives rise to an extradural or epitympanic abscess, or to an intradural cerebral abscess. The cerebral abscess, when small and in an early stage of development, is situated at the surface of the brain, but as it enlarges it sinks into the substance of the affected lobe. As the diagnosis between a superficial and epitympanic abscess, one the one hand, and a cerebral abscess on the other, is attended with much difficulty, von Bergmann holds that it is necessary in performing an operation to expose to view both the extradural abscess and the part of the temporal lobe most likely to be involved in the extension of the suppurative process. An operation is described by which the upper and anterior surfaces of the petrosal bone are exposed through a quadrangular opening made in the squamous portion of the temporal bone, just above the line of the zygoma, and between a line in front drawn directly upwards to the sagittal suture from the tragus, and a parallel line behind carried upwards from the posterior border of the mastoid process. By this wound the mastoid antrum and cells may be opened if necessary, and the sigmoid fossa be reached. In conclusion, Bergmann alludes to the successful results of the surgical treatment of infective thrombosis of the lateral sinus. Exposure and incision of the sinus, with ligature of the internal jugular vein, proved successful in 6 out of 13 cases treated by Jansen, of Berlin. These cases, added to those of Macewen and other surgeons, show that the operative treatment resulted in recovery in 27 out of 45 patients. Thrombosis of the lateral sinus, it is pointed out, is often associated with extradural abscess on the roof of the tympanic cavity, and in most cases of cerebellar abscess form a communication between this collection of pus and the suppuration in the middle ear. In exposing the outer surface of the mastoid process and the bone lying behind this, search should be made for the mastoid emissary vein. Not only is the orifice a good guide to the sinus, but in addition the state of the vessel may help the diagnosis. If it contains pus suppuration in and about the lateral sinus is indicated; if it be blocked by a thrombus, this will be a sure sign of thrombosis extending to the cavernous sinus. Von Bergmann, attributing much of the recent progress in cerebral surgery to improvements in technical details and in instruments, makes use, in opening the skull, of a circular saw worked by electricity, with which he divides the outer table, whilst the inner table is divided by the careful application of a chisel.—*Brit. Med. Jour.*

ANGINA PECTORIS, GOUTY ARTHRITIS AND DIABETES.—Ebstein, after relating in detail three cases, appends (*Berl. klin. Woch.*, June 24th, 1895) some remarks on the connection between these diseases. In two cases in which diabetes and gout occurred in fat individuals, there were also anginal attacks. In one case gout preceded diabetes, but in the other the reverse was noted. Most often diabetes follows upon gout. Attacks of gout may alternate with the diabetic manifestations. Diabetes appears to be a more favorable disease in the gouty. In both cases the angina pectoris was the most troublesome complaint. The anginal manifestations occurred in the first case ten years after the first attack of gout, whereas in the other case the angina appeared at the same time as the diabetes, or even before it. Both cases were, in the author's opinion, genuine examples of angina pectoris. It is difficult to determine in these cases whether the angina was dependent on the diabetes or on the gout. In both diseases the anginal attacks may be of a functional character. In both his cases the author thinks that the angina depended on disease in the circulatory apparatus, as changes in the heart were noted in both cases, and probably aneurysm in one of them. A sharp distinction cannot be drawn between angina caused by anatomical changes and that due to functional causes. The author has observed cases in which such anginal attacks have existed during many years. The prognosis is, however, serious, even if no change can be made out in the circulatory organs.—*Ibid.*

The Antiseptic Value of Permanganate of Calcium.—Nordas (*Gaz. Med. de Paris*, June 29, 1895) states that when permanganate of calcium is brought in contact with organic matters it decomposes into oxygen, manganese oxide and lime. That the oxidizing influence of this drug, together with its antiseptic power, is very considerable. Indeed, experiments have shown that it is more powerful than bichloride of mercury, is entirely free from toxic qualities and is not caustic. The colon bacillus is most sensitive to its action, ten milligrammes being sufficient to render completely sterile a litre of the culture of this micro-organism (dilution of 100,000) in 30 seconds. The pyogenes aureus, streptococcus, bacillus of Eberth, anthrax bacillus and the coma bacillus also are quickly destroyed by this drug. In comparative studies it has shown itself, as an antiseptic, to be one hundred times more powerful than permanganate of potassium.—*Therapeutic Gazette.*

OFFICIAL LIST OF CHANGES IN THE PUBLIC SERVICE.

THE NAVY.

For the week ending September 14, 1895:

Neilson, J. L., Surgeon, detached from the U. S. R. S. "Wabash" and to the U. S. S. "Maine."

Means, V. C. B., P. A. Surgeon, from Naval Hospital, New York, and to the U. S. S. "Maine."

Richards, T. W., Assistant Surgeon, from the U. S. R. S. "Minnesota" and to the U. S. S. "Maine."

Lewis, D. O., Surgeon, from the U. S. S. "Mohican" and to the U. S. S. "Marion."

Page, J. E., P. A. Surgeon, from the U. S. S. "Philadelphia" and to the Mare Island Hospital.

Smith, R. K., Assistant Surgeon, from the U. S. R. S. "Vermont" and to the U. S. S. "Philadelphia."

Gihon, A. L., Medical Director, detached from the Naval Hospital, Washington, D. C., and placed on retired list September 28th.

Bright, G. A., Medical Inspector, detached from the Navy Yard, New York, and to Naval Hospital, Washington, D. C.

Price, A. F., Medical Inspector, detached from Torpedo Station and to the New York Navy Yard.

Stephenson, B. F., Surgeon, detached from the Marine Rendezvous, Boston, and to the U. S. R. S. "Wabash."

Urie, J. F., P. A. Surgeon, ordered to the Marine Rendezvous, Boston. Mass.

Steele, J. M., detached from Marine Rendezvous, New York, and to the Torpedo Station, Newport.

Heneberger, L. G., ordered to Marine Rendezvous, New York, in addition to present duties.

Moore, J. H., Assistant Surgeon, detached from the U. S. S. "Atlanta" and ordered to the U. S. T. S. "Constellation."

Leach, Philip, Past Assistant Surgeon, ordered to the Naval Hospital, New York.

MARINE HOSPITAL SERVICE.

For the 16 days ending August 31, 1895:

Vansant, John, Surgeon, is granted leave of absence for 30 days, August 24th, 1895,

Hutton, W. H. H., Surgeon, is detailed as chairman board for physical examination officer revenue cutter service, August 22d, 1895.

Irwin, Fairfax, Surgeon, is detailed as chairman board for physical examination of candidates for revenue cutter service, August 30th, 1895.

Banks, C. E., P. A. Surgeon, is detailed as member board for physical examination of candidates for revenue cutter service, August 30th, 1895.

Young, G. B., P. A. Surgeon, upon expiration of leave of absence, to report at Bureau for temporary duty in laboratory, August 28th, 1895.

Brown, B W., P. A. Surgeon, is detailed as recorder board for physical examination of candidates for revenue cutter service, August 30th, 1895.

Sprague, E. K., is detailed as recorder board for physical examination of officers for revenue cutter service, August 22, 1895.

Greene, J. B., Assistant Surgeon, to proceed from Washington, D. C., to Wilmington, N. C., for temporary duty, August 22, 1895.

Miscellaneous Items.

Under this head space will be given (free of cost) to those paid-up subscribers who desire to change their location, or to dispose of practice or property. One insertion will be allowed, but inquiries must not be ordered addressed to this office.

Any news connected with professional men and matters in North and South Carolina will be appreciated by the Editor.

Dr. Catherine Chinault Runyon was admitted to membership in the Virginia Medical Society at its recent meeting. She is the first female physician admitted to membership. The North Carolina Medical Society has one female member, Dr. Annie L. Alexander, of Charlotte, admitted in 1885. We would be pleased to see others of Dr. Alexander's ability become members.

A NATIONAL DISGRACE.—The unrestricted traffic in nostrums is a disgrace to civilization. Communities and States are up in arms against alcohol as a beverage in all its forms, excepting one most detestable and villainous. Introduce some vile ingredient into the alcohol, christen and label it as a patent or proprietary medicine, and, lo! it is robed in innocence and welcomed to the homes of the righteous. A poison can be legally sold as such in most States only with a flaring label of warning, and after double or triple forms of registration by a competent pharmacist. Put it up as a medicine, decorate it with a seductive title and a rainbow wrapper, and at once it is beyond the restraints of regulation, and may be sold by street-hawkers, slaughter-shops, anybody and everybody, without let or hindrance. Where is the consistency, the intelligence, the justice, in this strange partiality for the nostrum curse?—*Western Druggist.*

Rivals of the Doctor.—A French physician figures out in *La Medecine Moderne* that the doctor is lucky if he sees one sick person in five, and that, as things now go, of all human beings doctors will soon be those who will see the fewest sick people. What with the strong-minded individual who does not believe in doctors, but "knows it all" himself; the mother, grandmother and mother-in-law, each of whom doctors all the children, big and little; the water, faith-, mind- and other "curists"; the volunteer, who has an "infallible remedy" for every ailing friend and acquaintance; and, finally, the prescribing druggist—it is doubtful if even one in five of the sick reach the doctor's office or send for him. He concludes that the "medical profession, which certainly ranks far above any other callings, is in reality a very inferior one in regard to material things, and from this point of view many trades necessitating manual labor often soar far above it. If we want a coat we cannot do without the tailor, nor without the shoemaker for a pair of boots; yet in that which appertains to the art of healing any ignoramus can be a formidable rival to us; so that not only have we, in the race of life, come to struggle against other medical men, but also against a multitude of individuals with various erotchets who enrich themselves by filching the fees out of our very pockets."

Health Reports.—The following health reports have been received at the office of the Supervising Surgeon-General Marine-Hospital Service:

Small-Pox—United States.

Louisiana: New Orleans, August 3 to 31, 2 deaths.

Michigan: Kalamazoo, August 17, 1 case; Calhoun, August 24, 1 case.

Tennessee: Memphis, August 1 to 31, 3 cases.

Texas: Eagle Pass, September 4 to 8, 5 cases and 3 deaths.

Total small-pox cases and deaths among refugees at Camp Jenner, near Eagle Pass, 177 cases, 55 deaths.

Small-Pox—Foreign.

Cairo, July 23 to August 5, 3 deaths.

Calcutta, July 20 to 27, 5 deaths.

Constantinople, June 1 to 31, 39 deaths.

Dublin, August 17 to 24, 3 cases.

Gibraltar, August 11 to 18, 1 case.

Havana, August 24 to 31, 2 deaths.

Hong Kong, July 20 to 27, 1 death.

London, England, August 17 to 24, 6 deaths.

Montevideo, July 27 to August 3, 1 case.

Naples, August 16 to 23, 1 case and 1 death.

Nice, July 1 to 31, 1 death.

Nogales, August 31, 1 case and 1 death.

St. Petersburg, August 3 to 10, 4 cases and 1 death.

Prague, August 3 to 17, 2 cases.

Rio de Janeiro, August 3 to 10, 68 deaths.

Rome, June 22 to 29, 1 death.

Yellow Fever—Foreign.

Brazil: Rio de Janeiro, August 3 to 10, 7 deaths; Santos, August 3 to 10, 2 cases.

Cuba: Havana, August 22 to 29, 90 cases, 30 deaths; Matanzas, Aug. 12 to 28, 12 cases; Santiago, August 17 to 31, 44 deaths; Santa Clara, August 24, 2 cases; Santa Domingo, August 24, 2 deaths; Sancti Spiritu, August 24, 30 cases.

Puerto Rico: San Juan, August 3 to 24, 21 cases, 14 deaths.

Cholera—Foreign.

China: Hong Kong, July 28 to August 3, 2 deaths.

France: Cognac, August 17 to 24, 1 death.

India: Calcutta, July 20 to 27, 9 deaths; Bombay, July 27 to August 2, 1 death; Singapore, July 16 to 22, 44 cases, 37 deaths.

Japan: Nagasaki, August 5 to 12, 40 cases, 30 deaths; Osaka and Hiogo, August 3 to 10, 243 cases, 179 deaths; Yokohama, August 2 to 16, 36 cases, 27 deaths,

Turkey in Asia: Aleppo, July 17 to 24, 24 cases, 21 deaths. Hamah, July 22 to August 3, 20 cases, 5 deaths; August 7 to 10, 1 death.

Dr. V. A. Whitley has removed from Norwood to Concord, N. C.

Dr. B. T. Bitting has removed from Rural Hall to Mizpah. N. C.

An illegal practitioner was sent to the Penitentiary for three months in New York. How many in North Carolina have suffered for violating the laws? Do your duty, Messrs. Solicitors.

We regret to learn that Dr. W. E. Headen, of Chapel Hill, met with a very painful injury a short time since, by being thrown from his buggy against a barbed-wire fence.

Reading Notices.

Elixir Six Iodides, Elixir Six Bromides, Elixir Six Hypophosphites and Elixir Six Aperiens (Walker-Green's) have been made uniform in price, namely, $8.00 per dozen. These Elixirs are rapidly gaining the confidence of the profession. The latest circular can be obtained upon request.

Chemical Food is a mixture of Phosphoric Acid and Phosphates, the value of which Physicians seem to have lost sight of, to some extent, in the past few years. The Robinson-Pettet Co., to whose advertisement (on page 13) we refer our readers, have placed upon the market a much improved form of this compound, "Robinson's Phosphoric Elixir." Its superiority consists in its uniform composition and high degree of palatability.

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Original Communications.

REPORT OF THE CHAIRMAN ON THE SECTION OF THE PRACTICE OF MEDICINE.

BY THOMAS M. RIDDICK, M.D., Woodville, N. C.

In lieu of the customary review of the whole field of Practice, I have prepared a paper on

PNEUMONITIS IN CHILDHOOD.

My friends, Drs. Marshall, Arthur, Grimes and Fitch have kindly prepared papers too, under my Section, which they will present.

In the selection of subjects I have endeavored to choose those that will prove of most interest to the practical physician when they are discussed.

Now, pneumonitis is a self-limited infectious disease, producing temporary pulmonary lesions that are peculiar to it. It is non-contagious.

There are two types of this malady which present themselves for our consideration: First, croupous or labor pneumonitis, where the pulmonary invasion is immediate, and the lung structure itself the original site of inflammatory activity; and second, broncho or lobular pneumonitis, where the lung involvement is a sequence of a preëxisting bronchitis, or rather a downward extension of the bronchial inflammation into the pulmonary tissue.

Each form of the disease has its distinguishing characteristics. For instance, broncho-pneumonia is often found as a complication in whooping-cough, measles, scarlatina, typhoid fever and diphtheritic croup, and we must not overlook hypostatic congestion and atelectasis in reviewing the factors in its causation. Children under the age of three years or thereabouts, it appears, are more given to this form of pneumonia, while the lobar or croupus type of this affection is more frequently found in those children who have passed the earlier years of infantile life and are approaching the stage of adolescence.

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*Read before the North Carolina Medical Society, May 15, 1895.

For many years the opinion obtained that pneumonitis was essentially an inflammatory affection, and exposure to dampness and cold were regarded as the chief agents in its generation. The frequent coexistence of a severe cough and cold at the time of an attack, seemed to support that view of its etiology. The fact, however, that it prevails as much in mild climates as in those of lower temperature, and the further fact that it often assails those who have not been in anywise subjected to exposure, antagonizes somewhat the former theory that prevailed as to its origin. We may class vicissitude of temperature, then, as being a predisposing condition, rather than a primary agent in setting up the disease.

Bad sanitary surroundings in this, as in other diseases, are potent auxiliaries in its spread and propagation, and many violent endemic attacks of it have been traced directly to the close proximity of cesspools to the habitation of the sick and to the atmospheric contamination resulting from bad plumbing. Over-crowding, poor ventilation and uncleanliness assist greatly in its production.

In short, it is now held that pneumonitis is a zymotic disease, and that wherever the specific pneumonic germ finds a favorable and fostering nidus there it propagates.

The lancet-shaped coccus of Frankel is claimed by many pathologists to be the source of trouble in pneumonitis, though Professor Prudden, a high authority, holds that Frankel's pneumococcus is not the only microbe which can generate pneumonia, but that pulmonary inflammation may result from the action of other microbes, especially where the pneumonia occurs as a complication of infectious diseases.

It must be admitted that the development of traumatic pneumonia, from forceful injury to the lung tissue, impairs somewhat the force of the theory which regards this disease as being of purely microbic origin.

In children the pathological anatomy of pneumonia is not radically different from what we find in grown-up people. The different stages of congestion, hepatization and softening or liquefaction are found, as in adults. Suppuration and gangrene are not frequently found among children, save in those grave cases where embolic plugging occurs. All three of the above-mentioned stages may exist at once, death resulting from the rapid extension of one condition into another more fatal.

The right pulmonary apex is generally first involved, then the left apex. Next in order is the left base, followed by the right base. Sometimes the inflammation is so widespread as to involve all of the pulmonary lobes in rapid succession, and often it passes over to the opposite lung, giving us a bilateral form of the disease.

In the first stage of hyperæmia the arterioles are greatly distended by the undue afflux of blood to the part. This is soon followed by the stage of red hepatization. Here the lung tissue is to a great extent solidified and resistant upon palpation. The tissue yields and breaks down when subjected to much pressure. Its color is a deep red, and on section presents a granular appearance. The bronchial tubes adjacent to the inflamed lobule contain fibrin, muco-pus and epithelium. Fibrin is also found on the pleura, which covers the affected lobe. The air vesicles contain epithelial cells, pus cells, fibrin and red blood globules.

When the stage of red hepatization is at its maximum of development the products of inflammation completely fill the air cells.

The stage of gray hepatization follows that of red hepatization, the lung structure showing a grayish mottled appearance. Here the cell contents take on granular degeneration, then soften and liquefy and are removed by absorption, when resolution sets in. Expectoration, too, is an active means in ridding the system of this pathological product.

In lieu of resolution a cheesy condition may supervene. In that case the pulmonary exudation assumes a condition of firmness and appears whitish and cheese-like. In some cases a necrosis of the lung tissue occurs, due to arrested circulation in the parts.

In childhood the inauguration of croupous pneumonia is somewhat different from that in the adult. In the latter a decided chill usually ushers in the attack, while in children a mere sensation of chilliness, sometimes followed by convulsions, is the initial announcement of the disease. Catarrhal pneumonia, being a consecutive affection, is more gradual in its approaches, and many of its prodromal features are those of the bronchial trouble, of which it is a sequence.

When we find the little sufferer with elevated temperature, restless, refusing to take nourishment, thirsty, face flushed, pulse much accelerated, respiration quickened, with marked enfeeblement and the facial expression anxious and indicative of suffering, we may reasonably suspect that pneumonitis has claimed it for a victim. In the acute forms of both croupous and well-developed catarrhal pneumonia these symptoms are present, though in the latter type they are somewhat mitigated.

In some authorities we find the expiratory moan placed as a pathognomonic sign, but my own observation is that this rule has exceptions. When it is present it doubtless occurs from the pain experienced in the inflamed part, during the acts of respiration, though pronounced gastric distress would give a kindred symptom.

In the incipient stage we observe that the cough is dry and hacking in character and a source of much irritation to the little patient, though as the disease advances with favorable tendencies it becomes looser and much less painful, the detachment of the sputum becoming easier.

The misty hue of the expectorated matter, which is a cardinal diagnostic proof in adult pneumonia, is wanting in childhood. In fact, in very young children comparatively little of the sputum is expectorated, the patient, in most instances, swallowing it involuntarily.

The headache, which is a frequent feature, especially if it be conjoined with convulsions and decided hebetude of the senses in the earlier stages, is likely to awaken grave suspicions of an affection of the central nervous system, and pneumonia has often been mistaken for meningitis by too hasty diagnosticians. Nausea and vomiting, together with muscular twitchings, appear confirmatory of such an opinion, but the later manifestations show plainly that the thorax, rather than the brain, is the pathological seat. After the full development of labor pneumonia, the proofs elicited by ausculation and percussion leave no further reasons for doubt or obscurity as to the character of the malady in question.

In the catarrhal form of pneumonia we are more prone to error in diagnosis than in the lobar or croupous type, for the physical signs are much harder to bring out, due to their lessened intensity. Frequently bronchitis is diagnosed where a catarrhal pneumonia really exists. But as the conditions to be combatted demand remedial measures that are corrective of both bronchial and pulmonary inflammation, it does not matter greatly if such a pardonable diagnostic sin be committed.

The hasty respiration, sometimes reaching 30, 40 and even 50 respiratory movements in a minute, is a valuable sign-board here, and assists no little in the differential diagnosis. Dyspnœa is often marked.

The temperature range is variable, depending much upon the severity of the attack. In the milder cases it runs from 101° to 103°, while in the more severe ones it often runs from 105° to 106°. As much as 107° has been recorded.

In the major portion of cases 104° may be said to represent the average, when the fastigium is reached. In robust children, where a sthenic form of inflammation exists, this gives rise to great flushing of the face, while in others, of a more asthenic and anæmic type, we see pallor of the countenance and a somewhat depressed temperature.

A moist but furred tongue is the rule. The thirst is pronounced. For the most part the bowels are constipated and the secretions checked. The urine is more concentrated and takes on a deeper red color, and in some patients urates are found after it has cooled.

While the inflammatory processes are most active the chlorides are much reduced in quantity or are wholly diminished.

As the symptoms abate there is an evident improvement visible in the manner and general appearance of the patient. Soon the playthings are called for and the childish desires and wants of the healthy state reappear.

The convalescence, in favorable cases, is gradual and steady, if there be no relapse, though a cough often remains for a while as a lingering memento of the attack.

The prognosis, of course, is measured by the form and intensity of the disease and the presence or absence of complications. It would be needless to advert to the fact that a bilateral seizure of pneumonia is less favorable, as to outcome, than a unilateral one, and that secondary attacks, which are the sequelæ of measles, whooping-cough and other debilitating affections are more to be dreaded than primary attacks. We may put it down as a fact that any preëxisting or accompanying condition that increases the asthenic state of the patient must always be regarded with alarm, for death occurs from exhaustion in a large proportion of cases. The younger the child the greater the danger, for the patient, by reason of its tender years, is lacklng in that reserve energy, which might pull an older and stronger child through a crisis.

We will now consider the treatment or rational therapeutics indicated in both the croupous and catarrhal forms of pneumonitis.

In the lobular form of pneumonia we remember that we must not only control the antecedent bronchitis by counter-irritation, over the tract of inflammation, and by expectorant agents that control the inflamed state of the bronchial mucous-membrane and favor the detachment and expulsion of mucus from the air-passages, but we must also fight the additional debility of the patient, which has been superinduced by the further extension of the original trouble into the lung substance. We must ever be watchful of the fatal effects of a prolonged asthenic, and remedies that brace and tone the heart and exercise a general tonic and supportive influence upon the whole system are indicated.

As a counter-irritant, cantharidal collodion is my choice, applied judiciously over the area of inflammation. As an expectorant and stimulating agent to the inflamed bronchial membrane, I prefer the combination of ipecac and ammonium chloride, regulating, of course, the quantity in all cases to the age of my patient. To support the heart, I give digitalis, and quinine to lessen inflammatory processes. If the cough be of the irritable type, I add tinct. opii. camph. to my expectorant mixture prorenata.

The secretions must be kept active and the bowels open, and to secure this end nothing, in my opinion, is better than calomel, followed by a saline purge. Nutrients and stimulants, in some cases badly administered, are absolute essentials, if we do not want a fatal termination from exhaustion.

Any collateral troubles that may arise must, of course, be met by such appropriate measures as will suggest themselves to every practical physician. If the pyrexia exceed 102°, I give phenacetin as long as needful, but no longer, for all cardiac depressants should be avoided, as far as possible, lest the last straw might break the camel's back.

In croupous pneumonia, where the onslaught of the disease is sudden, our measures must, perhaps, be a little intensified and heroic, for we have an active, rather than a passive, form of congestion to combat. Many of the remedial measures above-named find a good field for therapeutic application here; but our work is somewhat shorter and must be sharper. The fires of an active inflammation blaze, so to speak, and we must take antiphlogistic weapons from our medical armamentarium if we would come off victorious in the fray.

In the earlier stages the cardiac sedatives exhibited conservatively, find their place. Aconite and veratrum viride are the best of these.

In the second stage strychnine and digitalis should be given to support the weakened and flagging heart, so that it may pump the blood up through a solidified area. Quinine, to abate inflammatory energy; ammonium, salts and ipecac, to favor expectoration; good counter-irritation, not pushed to that point, however, where the patient would cry for mercy, as my facetious friend, Dr. Oscar McMullan, might suggest, but rationally employed; active stimulation with milk toddy and egg-nogg; calomel, to relieve the disordered secretions, and iron and arsenic, if there be any coexistence of malaria, are the therapeutic measures demanded. An equable and uniform temperature in the sick chamber is a *sine qua non.*

DISCUSSION.

Dr. Hill remarked, as he had the day before, that the treatment for pneumonia is whiskey. As an authority he gave Dr. Flint, who cited one case in which he used half an ounce of pure French brandy every half hour for six hours and the patient recovered. He had seen time and again cases of pneumonia in children where they were given a good dose of whiskey, and the crying and screaming would stop and they would go to sleep. As for quinine, he had never seen in his whole practice where it did one particle of good and he had seen it do harm time and again. If the pneumonia patient is given quinine he is gotten into a fretful, nervous condition, that quinine always produces. He was surprised that in the mention of heart stimulants for cases of pneumonia no mention had been made of nitro-glycerine. He had seen cases where the patient was almost moribund and was given nitro-glycerine and it brought the child out. Then the antidote, whiskey, should be given. He should continue to use whiskey till he found something better.

Dr. McMullan raised his voice against the use of antipyrine in pneumonia. He did not believe that fever at all times was something to be combatted, but was rather incline . to think it is a conservative process by which poison is eliminated from the system. He did not believe it ought to be interfered with materially, certainly not by depressing the heat centres by the cold tar series—possibly by skin elimination, unless the fever becomes abnormally high. In a case of pneumonia he is always glad to have a temperature of 103°, and he was glad to see the patient in pain, for then he knows the patient has strength enough to throw it off. He was not an advocate for cantharides, for he is of the opinion that they are too irritable. He asked that the Society should sprinkle a few grains of salt over what Dr. Riddick had said about cantharides.

Dr. Frank Duffy reported a case of a child three years old whom he had left very sick with pneumonia. The patient had whooping-cough, but long enough to be well, but was still having paroxysms of violent coughing, and is suffering with bronchial pneumonia in both lungs. On the last Sunday the temperature having risen very high and it appearing that the patient was about to die, he was summoned and found the child cold, his arms blue, respiration very rapid and occasionally having those paroxysms of coughing. It looked like dissolution was imminent. He gave the child peroxide of hydrogen, a half teaspoonful, which was given frequently, sometimes not more than ten or fifteen minutes apart. At one time the mother laid the child down and went away, supposing it to be about expiring, but whether from the remedy or not, the color began to return, and he now thought the child in a fair way of recovery. He had used that remedy some, but that was the most marked instance of its use. There are some objections to its use and some good reasons for not expecting very much from it, but he was very much impressed with that case, and had spoken to some medical brothers about it, among whom is Dr. Hyatt, who thinks it a very good remedy. There is a great deal to be said in connection with the treatment of pneumonia. No doubt doctors have done a great deal of harm as well as good. The first hospital he was at in Baltimore Dr. George Farnandis, one of the visiting physicians, said if a patient had pneumonia he would give a half grain of tartar emetic every two hours. A lady 80 years of age had pneumonia at that time and was treated with that medicine and recovered. Though he knew all that has been said against it, still he had some lingering respect for the remedy, growing out of his observation of it, although he had himself used it very little. He stimulated very freely with alcohol.

Dr. Haigh did not think the statement ought to go unchallenged that quinine is of no service in pneumonia. Often physicians see published a case where certain remedies have been used with certain results, and think they ought to use the remedy themselves, and do use it and find it to be of very little service. He himself had often been very much disappointed in that way, but he thinks that the reason was a mistake on his part, probably because he did not know the mode of using the remedy and did not use it properly. Dr. Otis claimed that pneumonia could be aborted by the use of quinine, and he gave as high as thirty or forty grains at the commencement of the disease and claimed that he aborted the disease frequently. He himself was perfectly satisfied that quinine is of much service in pneumonia and did not think it ought to be thrown aside without some remarks in its favor. He had seen the effects of this disease cut short from a few doses of quinine.

Dr. Sykes agreed with Dr. Haigh about the use of quinine. In the treatment of pneumonia in adults and in women and also in children who have reached 12 years, he did not want a better remedy than quinine and spirits of turpentine. He had never lost a case under 60 years of age from pneumonia, except one girl about 18 years oid, who had had some lung trouble ever since childhood. He had treated quite a number of children and did not want anything better than deodorized tincture of opium and spirits of nitre and syrup of ipecac. He would not be willing to have quinine set aside; he had used it in the treatment of children with signal success.

Dr. Faison wished to bring out one ponit in the treatment of Dr. Riddick, and that was the diagnosis. When there is bronchitis and the temperature goes from 99 to 100 up to 102½ and 103, he generally made the case pneumonia without listening to protest. He took for granted that children's cases were those Dr. Riddick had reported particularly. In treating children he had not relied upon such medicine; but when he would see children with the livid hue about the face and hard breathing, he had never seen anything act so admirably as a hot bath with plenty of bi-carbonate of sodium; the child would rest easily after this. He had absolutely discarded quinine in those cases. He used the aromatic spirits of ammonia with chloroform to allay the pain. He used quinine and Dr. Hill's antidote, whiskey. The point he wished to bring out was that the temperature is important in the diagnosis of pneumonia in children.

SUSPECTING that the therapeutic action of salicylic acid in acute articular rheumatism was due to antineuralgic action of the medicament on the rheumatic arthritis, and not to any specific action of its own, Professor Maragliano requested Drs. Jemma and Marengo to institute experiments on the curative influence of the drug applied locally in the form of an ointment. This mode of administering the acid was found to be preferable to giving it by the mouth; the derangements of digestion—even gastritis sometimes—so frequently observed when used internally do not follow its external application. From the author's researches (*Gaz. d. Osp.*) it is seen that salicylic acid has a decided and constant analgesic property; it acts on the diseased joints like a mild revulsant, not giving rise to any subjective symptoms. Its antipyretic action is very slight, but this is also true of it when given by the mouth.—*Practitioner.*

MANAGEMENT OF RING-WORM.—This may with certainty be removed by first rubbing briskly with turpentine until smarting is induced, washing with carbolic acid soap (10 per cent.), and finally, after drying, applying two or three coats of tincture of iodine.—*Med. Age.*

REPORT OF SURGICAL CASES.

By Francis Duffy, M.D., Newbern, N. C.

INFLAMMATION OF KNEE-JOINT OF TRAUMATIC ORIGIN—SUBSEQUENT DEVELOPMENT OF MALIGNANT TUMOR, WHICH WAS MISTAKEN FOR ANEURISM OF THE POPLITEAL ARTERY.

Patient, man, æt 21 years, applied for treatment December 7th, 1892. The knee-joint was very much enlarged, tense and hot pain was almost constant, and, judging from complaints of patient, sometimes very severe.

Patient was a sailor; more than a year before he had fallen on the deck of a vessel and injured his knee-joint; some time after that he was accidentally struck on the knee with a hammer, and lately sustained a third injury by falling on the injured part. Inflammation of the knee-joint was easy to discover, but there were complications which were not easy to determine. The condyles were expanded and the popliteal space bulging. Puncture of the joint at the inner side with an aspiratory needle brought away a small quantity of bloody serum.

I padded the limb with cotton and put it up in a plaster-Paris dressing, so as to keep the parts immovable and subject to equal pressure. Patient was kept under general treatment, such as opiates, to relieve pain, iodide of iron, cod-liver oil; but there was no improvement. After about a week the cast was too tight and was removed. Careful examination of the popliteal region discovered pulsation, not only over the artery, but a little to each side. The fingers of each hand being pressed on opposite sides of the artery and separated two inches apart, would each detect synchronous pulsation. When the ear was applied a loud aneurismal (?) bruit was heard. Aneurism was supposed to be present.

The patient was examined by Drs. F. W. Hughes, Charles Duffy and Leinster Duffy and the diagnosis confirmed. The condition of the limb was such as to require amputation, which was done at about the junction of the middle and lower third.

Recovery was tedious, but by March 15th, 1893, the stump was healed and patient robust in appearance.

Examination of the amputated joint revealed the fact that the popliteal artery was intact and no aneurism present. A tumor of malignant appearance originated on the posterior aspect of the internal condyle, which was rough and eroded, and from which surface projected grayish fungus-looking masses. It may be questioned whether this tumor pulsated or whether the impulse of the artery was transmitted through the surrounding tissues. Of course pressure would account for the murmur. The patient went away and

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*Read before the North Carolina Medical Society, May 15, 1895

I lost sight of him, but I think it likely that the trouble has recurred in the stump or some other part.

Twice before, in the last fifteen years have I reported to this Society cases of tumors which at first were thought to be aneurismal, and in both of these cases amputations were performed—one in arm, the other in the thigh. In both of these the patients died after entirely recovering from the amputation.

HYPERTROPHIC NASAL CATARRH TREATED BY ELECTROLYSIS.

A gentleman æt 34 years, a robust subject, applied to me January 12th, 1893, suffering with nasal catarrh. The pharynx was subacutely inflamed. The discharge was not profuse and but little offensive. One nostril was occluded to natural respiration—a little air could be forced through. The other was less obstructed—the voice was decidedly "nasal."

The patient was treated with douches and internal medication. Solutions of boracic and carbolic acids, listerine, glycerin, albolene, etc., were freely tried with different forms of douche aparatus, nasal irrigations and sprays, with slight temporary benefit. The internal administration of iodide of potassium was also of some benefit.

Not obtaining much benefit, I resorted to strong carbolic acid. After benumbing the mucous-membrane with cocaine, I would wrap a piece of absorbent cotton around the end of a probe, and, after dipping that in liquid carbolic acid, pass it in the nostril and apply it freely and as thoroughly as practicable to the diseased tissue. This was done twice a week for a few weeks. The nose, which would bleed any time when forcibly blown, would always bleed a little after those operations. Douches were kept up between times. These powders were used with Bosworth's powder-blower, iodoform, iatral, iodol, etc. Still there was no marked relief. After four or five months of such treatment the patient went (he informed me) to Philadelphia, and was under the treatment of a specialist several weeks. His throat was benefited, but he returned to me with the nose about in the same condition as before. The nasal mucous membrane was very much thickened, soft and bleeding at slight touch along the turbinated bones, but tough on the floor of the anterior nares, the passage being very much encroached on and the orifice narrowed.

I then decided to try electrolysis, which was begun in August, 1893. The battery used was Waite & Bartlett's liquid 24-cell galvanic, which, however' is much more powerful than is necessary for that purpose. With clean elements and fresh fluid, six cells will give as much force as is necessary, viz: from 5 to 10 milliamperes. But only by attaching the milliampere meter can you correctly estimate the force of the current. Two forms of electrodes were used—one, a slightly bent staff, with a round point about 20 milliamperes in diameter; the other, a straight shaft, with a thin, flat blade, about 2 inches long and $\frac{1}{8}$ inch in diameter.

Pledgets of cotton were soaked in strong solution of cocaine and were pushed within the nose and allowed to remain until the organ was benumbed, then the sound electrode was inserted and pressed gently and gradually along the floor of the nares. After a few minutes the obstruction would give way and the electrode would pass through; it was then drawn back in the same gradual manner. The electrode was then changed, taking the thin, flat one and gently passing it in the narrow parts of the passage between the septum and the turbinated bones. The current was applied about fifteen minutes, and, notwithstanding the cocaine, caused considerable irritation, disposing the patient to sneeze, especially when stronger than 5 or 6 milliamperes. The negative pole was, of course, used in the nose, the positive either held in the hand or placed on the cheek, but it was interesting to note the difference in the meter when the pole was changed from the hand to the cheek, the less resistance in the short circuit giving, of course, a stronger current. There was, at first, always some hemorrhage after these operations, and if the current was too strong, there was increased local irritation for several days. The current was applied twice a week and some weeks were skipped. About twenty applications in all were made, and while he cannot be said to be cured, he is in a very much improved condition and regards the electricity as the only thing which was of real benefit to him. At first only the worst side was operated on, which soon became the best side, the patient breathing through it with comfort and the tones of his voice much improved. Then the other side was operated on with like result.

The patient has not been under my observation for several months and has moved away to a distant State. This is the only case of the kind on which I have had any opportunity to try the treatment.

DIFFICULT CASE OF ERROR OF REFRACTION OF THE EYE.

Ignatius W. Brock, æt 24 years, consulted me May 31st, 1892, on account of trouble with his eyes. Being an artist, his eyes had been very much taxed by painting, drawing and the like, for a number of years. Examination revealed astigmatism.

Vision R. E., 20–30 +. L. E. 20–20.

The different lenses which his eye would accept and the different axes at which cylindrical lenses were accepted at different trials soon made it evident that a correct result could scarcely be obtained without the use of atropine. He was so informed, but rather than have his work interfered with so long by dilated pupils, he preferred to have me do the best that I could by repeated trials without midriatics. The record shows that on the 31st of May, with

R. E. cyl. — 36, axis 180°, vision was 20–20.

L. E- cyl. + 72, axis 90° ⊃ cyl. — 50, axis 180°, vision 20–20.

June 7th, R. E. cyl. — 36, axis 10° ⊃ cyl. + 60, axis 100°, vision 20–20.
" L. E. cyl. — 50, axis 170° ⊃ cyl. — 72, axis 80°, vision 20–20.
June 21st, R. E. cyl. — 36, axis 180°, vision 20–20.
" L. E. cyl. — 36, axis 160°, vision 20–20.
July 18th, R. E. cyl. — 38, axis 10°, vision 20–20.
" L. E. cyl. — 40, axis 165°, vision 20–20.

Other trials seeming to point to this last formula, I wrote it for him and had it filled; but it did not prove satisfactory; the eyes were not at ease and tired on use.

In November or December, 1892, Mr. Brock being in New York, consulted Dr. Knapp at his office, as he informs me, who put homatopine in his eyes at the first visit, repeating in half hour, and under that influence examined the eyes, not using it again. Two days afterward, he says, the Doctor made another examination, and again in about one week. He gave him spectacles approximating this:

℞.—Both eyes, cyl. + 0.75, D., axis 90°.

These proved unsatisfactory, and vision (at this writing) with these glasses is as follows:

R. E. 20–30. L. E. 20–30 +.

When reading or drawing, while wearing the spectacles, the eyes would become painful and patient thought he was as well without them, and so discontinued their use.

In January, 1894, Mr. Brock states he was in Baltimore and consulted Dr. J. J. Chisholm, who first tested his eyes without atropine and then applied homatropine once and tested two hours afterward, then tested again next day and prescribed this formula, which patient showed me:

R. E. cyl. — 1.25, axis 15°.
L. E. cyl. — 1., axis 165°.

With these patient sees nearly 20–20, but the letters are a little blurred and dial not uniform. He wore them nearly three months, but his eyes, after a short time were uneasy and sometimes headache followed their use.

Mr. Brock then consulted me again, and on hearing him carefully, I came to the conclusion that the accommodation of the eyes had now been relaxed, and consequently a correct formula had not been obtained.

April 26th I made four applications of a 4-grain to ℥ i. solution of atropia sulph. at intervals of from one to three hours.

On the 27th three applications were made and patient was very much affected in a general way—dryness, dizziness, difficulty in urinating, etc.

On the 28th I applied a strong solution of cocaine to the eyes and the pupils became distinctly wider, notwithstanding the fact that the patient was nearly poisoned by frequent instillation of atropine in the eyes, taking care at the same time to keep it out of the tear passages.

Patient now read $\frac{20}{100}$ with each eye, and with glasses as follows. No improvement with spherical glasses. With cylindrics:

R. E. + 24, axis 90°, ⊃ — 72, axis 180°, vision 20–20.
Left eye + 30, axis 90°, ⊃ — 30, axis 180°, 20–20.

On May 8th no atropine having been used since April 27th, eyes accepted as follows:

R. E. cyl. + 40, axis 90°, ⊃ cyl. — 72, axis 180°, vision 20–20.
L. E. cyl. + 36, axis 90°, ⊃ cyl. — 60, axis 180°, 20–20.

The eyes had been rested since the use of the atropine. It is interesting to note the changes which the eyes underwent until the 11th, as the eyes by use lost more and more the effects of the recent rest from atropine, and even after the pupil was reduced to its normal state.

10th.—R. E. cyl. + 50, axis 90°, ⊃ — 36, axis 180°.
L. E. " + 50, axis 80°, ⊃ — 50, axis 170.

This last formula was at last repeatedly accepted, and, as will be seen, is a compromise between the demands of the eyes with and without atropine.

O. D. spher. — 1.12 ⊃ cyl. + 2. axis 100°.
O. S. spher. — 0.75 ⊃ cyl. + 1.50 axis 85°.

The patient is using this formula with good results.

It will be observed that some of these formula are written in inch and some in dioptric scale.

The above case is reported, not to discredit the work of the eminent specialists referred to, but to show the inadequacy of incomplete relaxation of accommodation and hurried examinations in such cases.

REMARKS ON THE SURGICAL TREATMENT OF CHOLELITHIASIS.*

By Hugh M. Taylor, M.D., Richmond, Va., Professor of Practice of Surgery in the University College of Medicine, Surgeon to Virginia Hospital, etc.

The surgery of the gall-tract is perhaps claiming a professional interest second only to that accorded to appendicitis. The one morbid condition is as essentially surgical as the other, and both are equally responsible for ill-health and death. The evolution of the subject of appendicitis received an impetus earlier. It followed close upon the concentration of thought on the pelvic phlegmons, but in view of its importance gall-tract surgery is receiving its merited share of attention. Few of us can review our professional work and not be conscious of having treated operable cases of cholelithiasis and its consequences unrecognized as such. The credit of increasing our diagnostic acumen in this field belongs, in a great measure, to the surgical clinic. In the medical clinic, percussion, palpation, etc., revealed but little tangible information. In the surgical clinic, on the other hand, the exploratory incision revealed the correct anatomico-pathological condition, associated the symptoms manifested with the morbid conditions found, and it is now defining on logical lines the limitations and technique of operative interference for the relief of the various products of cholelithiasis. The evolution of the subject has been rapid. Within the past ten or twelve years all the marked advance in its study has been made, and, while already yet in its infancy, the field of operative procedure has been immensely widened and many of its morbid conditions have been brought within the scope of legitimate conservative surgery, with untold benefit to mankind. Viewed in the light of recent knowledge, we appreciate the fact that few of us have failed to treat as gastralgia, indigestion, diaphragmatic pleurisy, enlargement of the liver, malarial fever, bilious fever, etc., cases which should have been diagnosed and treated as cholelithiasis and its consequences. In my own early professional work I can recall at least a half dozen clearly operable cases which were allowed to go from bad to worse and die without operative aid. Enough has been ascertained to prove that the so-called medical treatment offers but a small chance of benefiting the condition of impacted gall-stone or stones, and certainly no possible chance of curing a cholangitis or empyema or cystitis of the gall-bladder. Experience shows that the solution of gall-stones by medication is a myth, and that whenever they have attained to any size, or are present in considerable numbers and are producing symptoms, they can only be rationally treated by operation. Moreover, it is true that a laparotomy *per se* for the relief of such conditions is attended with less shock and danger than is a laparotomy for other intraperitoneal troubles, as there will usually be very much less evisceration. This much in connection with the subject of cholelithiasis is practically settled. The unsettled problem is to classify the various morbid conditions; to differentiate clinically between them prior to an exploratory incision and to apply to their relief the most rational available surgical procedure. In this we have a field for experimental pioneer work, the cultivation of which offers rich reward.

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*Read before the Richmond Academy of Medicine and Surgery Aug. 27. 1895.

What are the morbid conditions calling for surgical interference? By almost unanimity of opinion, and specifically, according to an enumeration of Professor W. Mayo Robson, operative interference is indicated, and the earlier the better—

(*a*) In cases of repeated attacks of biliary colic, apparently due to gall-stones, which, not yielding to medical treatment, are wearing out the patient's strength.

(*b*) In perforation from ulceration.

(*c*) When there is suppuration in the neighborhood of the gall-bladder set up by gall-stones.

(*d*) In empyema of the gall-bladder, which is usually accompanied by peritonitis.

(*e*) In dropsy of the gall-bladder.

(*f*) In obstructive jaundice, when there is reason to think that the common duct is occluded by gall-stones.

The study of the subject of cholelithiasis and its consequences will be facilitated if we keep in mind the fact that the gall-tract is a drain-tract, through which the bile from the liver and the mucus from the gall-bladder must pass unobstructed, to ensure good health. Obstruction means the damming back of the outflowing products, dilatation of the ducts or gall-bladder, irritation of the tracts, suppuration in the tracts, extension of the inflammation to the peritoneal investment of the tracts, adhesions and matting around the inflamed tube, and a pathological condition analogous to inflammation in the Fallopian tubes and vermiform appendix. While a catarrhal cholangitis, the inflammation limited to the mucous lining of the tubes, may be possible, usually all the coats (the peritoneal included) are involved.

We should also keep well in mind that, while an obstrnction in the cystic duct dams back the secretions of the gall-bladder only, an obstruction in the common duct dams back the bile from the liver as well as the mucus from the gall-bladder. Obstruction of the cystic induces dropsy of the gall-bladder, empyema, chronic cystitis, inflammation of its coats, including the peritoneal investment, perforation or gangrene, and the local and constitutional symptoms incident to such morbid conditions.

Obstruction in the common duct induces inflammation of the duct, extension of that inflammation to the peritoneal investment, local peritonitis, adhesions, and, perhaps, ulceration, and perforation, dilatation of the duct, decomposition of the retained products within the duct, and systemic poison as a consequence. From the irritation, alone, reflex disturbances are not infrequent, while the chills, fever, sweats, etc., make a septic cholangitis, simulate so closely malarial, bilious and other febrile manifestations. There is no jaundice in cystic duct obstruction. Varying jaundice in common duct obstruction from stone. Persistent, unvarying jaundice in obstruction from neoplasms, benign or malignant, pressing on the tube is the rule.

Obstruction of the common duct, from whatever cause, if persistent enough, dams back the bile, induces cholæmia and its consequences; not the least serious of which is its effects upon the blood.

We should remember that stones in the gall-bladder do not necessarily give rise to trouble. It is estimated that 10 per cent. of adult males, 25 per cent of adult females, and 36 per cent. of the insane have gall-stones, and only from 1 to 2 per cent. have symptoms of the same. While this estimate of cases giving trouble is too small, it helps to sustain the well-known fact that many gall-bladders are full of stones which are doing no harm, but then again, they may give trouble by irritation, accumulation, infection and inflammatory changes, often of an intense type. Each attack of inflammation of the gall-bladder due to stones therein, and with no obstruction, causes more or less thickening of its walls and subsequent contraction of the bladder, until finally nothing remains but a bound-down tube. Stones in the cystic duct, or stenosis, induce changes in the gall-bladder and duct, septic, ulcerative or gangrenous, and colic, frequent and exhausting. Stones in the common duct induce urgent symptoms and call for prompt relief.

The dangers of cholelithiasis and its consequences as grouped as:

(*a*) That repeated attacks may, and not infrequently do, exhaust the patient. Cases are on record in which the extreme vomiting and prolonged suffering of one attack has terminated fatally

(*b*) Fatal cholæmia, with its strong hemorrhagic tendency, both post- and ante-operative.

(*c*) Distension of the gall-bladder until it enlarges sufficiently, in some cases, to reach to the pelvis, pressure effects incident thereto, and local and general effects from the decomposition of its retained products, i. e., empyema and cystitis.

If we recall its rich lymphatic supply, we will readily understand the rapidly occurring and serious systemic poison in suppuration about the gall-tract. Mr. Tait and others have found stones in hepatic abscesses. It is easy to understand that a stone formed and retained in the hepatic duct *may* induce an irritation and afford a suitable environment for the morbific effect of the common bacillus of the colon and other pathogenic germs. It is held by others, however, that gall-stones are invariably formed in the gall-bladder, as a result of the inspissation and sluggish flow of bile at that point.

What operation shall be done, and how it shall be done, depends upon the indications to be met by operative interference. It goes without saying that not every case of cholelithiasis demands an operation. Gall-stones in great numbers are found in the gall-bladder without having induced symptoms of their presence, the patient continuing in good health. Under such circumstances there is no indication and no need for surgical aid. Only when symptoms incident to gall-stones are marked and continuous are we justified in interfering surgically. This justification will not, however, be wanting sooner or later if obstruction from stone, stricture or morbid growth exists. under such circumstances interference is imperative. The sooner the better, and this conclusion is fully sustained by the good results which are daily accumulating.

What are the operations applicable to the relief of gall-tract troubles? Prominent among the operative procedures which are now and have been in vogue for the past ten years are cholecystotomy, cholecystostomy, cholecystenterostomy and choledochotomy, Of these the operations upon which most interest is being centered, the comparative value of which is, to some extent, a matter of dispute, are choledochotomy and cholecystenterostomy. Cholecystenterostomy was an advance of no small proportions over cholecystostomy. The technique of this operation, as now performed, is so simple, where the gall-bladder is not too much contracted; its immediate effects are so strikingly good; its execution attended with so little danger, that it was heralded as almost an ideal operation. Where the obstruction is in the cystic duct, when the damage is due to retention of the secretions of the gall-bladder, drainage into the duodenum is a great improvement over drainage through an incision into the abdominal parietes. When the obstruction is in the common duct, by cholecystenterostomy the current of bile is turned through the cystic duct and gall-bladder into the duodenum and its usefulness to the animal economy is not lost, as is the case where it escapes by means of a cholecystostomy. By it drainage of the suppurating gall-tract is secured and systemic poison, i. e., cholæmia and septicæmia are prevented. Its ease of execution, its minimum death-rate and its immediate effects for good, mark it as an advance of large proportions. Nature pointed the surgeon to this way of draining the suppurating area around the gall-tract by not infrequently forming adhesions between the gall-bladder and duodenum and emptying the suppurating cavity into the intestine. For years various operators have essayed to imitate nature by trying to establish a gall-bladder and duodenal anastomosis by sutures; but not until the advent of that ingenious product of American invention (Murphy Button) was the technique of cholecystenterostomy, so simplified and so completely shorn of danger as to make it safe almost in the hands of the novice.

Dr. Murphy enumerates the indications for cholecystenterostomy as follows:

1. In all cases where it is desirable to drain the gall-bladder.

2. In all cases of perforation into the abdominal cavity where the duct must be obliterated by the reparative process.

3. In all cases of cholelithiasis where obstruction of duct is present, or where the reflex disturbances of digestion are marked.

4. In all cases of cholecystitis, either with or without gall-stones.

5. In all profusely discharging biliary fistulæ, either following operations or as a sequelæ of pathological changes in gall-tract.

It will be seen that Dr. Murphy finds in cholecystenterostomy by means of his anastomosis button a means for the relief of a large portion of the morbid conditions incident to cholelithiasis. His contraindications for its use are mainly a too much contracted gall-bladder to get the button in, where the adhesions are so extensive that we cannot get the duodenum up to the gall-bladder without risk of kinking it and inducing intestinal obstruction. Dr. Murphy himself and many operators, especially in this country, have furnished us with ample proof of the usefulness of this operation, which makes a new short route from the gall-tract to the intestinal canal. But a continued evolution of the subject of the surgical treatment of gall-tract diseases demonstrates to the satisfaction of many, whose opinions merit our regard, that cholecystenterostomy is not an ideal operation. It has a limited scope of application, and is only indicated for irremediable stenosis of the duct or where the impacted stone or obstruction, of whatever nature, cannot be removed. The ideal operation contemplates restoring the gall-tract to its natural state, reëstablishing it as a drainage-tract. This is accomplished by removing the obstruction (the cause of the morbid changes) which, in a majority of cases, is an impacted stone. The operation of choledochotomy, i. e., incising the duct, removing the stone, immediate suturing of the duct and drainage, as a precaution, is the ideal operation.

For a time surgeons hesitated to incise and suture the duct for fear of eakage of bile. Experience shows it to be safe and curative in the full sense of the word. Curative, in that not only is drainage secured, but the cause of the morbid condition (the stone) is removed. As long as the stone remains in the duct it is an irritant, and inflammation, catarrhal or septic, and reflex gastric disturbances will continue. Cholecystenterostomy does not remove the stone impacted in the duct, and this is the weak point which limits its application. Cholodochotomy is safe. The mortality of incising and suturing the duct is less than 18 per cent.

It is true that it is not always an easy matter to find the duct and stone, and sometimes it is impossible either to locate the stone or remove it after it is located, or to bring the bound-down duct into position to suture it; but an improved technique is rendering this is a less formidable objection to cholodochotomy.

Dr. Elliott, of Boston, finds great advantage in placing the patient in a reversed Trendelenburg position, and also urges that the sutures to close the incision in the duct be passed before the exposed stone is removed. Some authors claim that a cholecystostomy should be done in connection with incision and suture of the duct, if we have an existing empyema of the gall-bladder or suppurating cholangitis, for the better drainage of the suppurating tract; but others contend if we remove the obstruction in the tubes that sufficient and curative drainage will go on through the natural tract without additional aid. While many are better satisfied to drain with gauze the area of the sutured duct for a short time, still others, however, do not fear the leakage of bile and do not hesitate to close at once the abdomen.

An objection urged against cholecystenterostomy is the danger of infection of the gall-tract by the *bacillus coli communis* and infection of the liver;

but, admitting this possible danger incident to establishing a short route for infection from the duodenum to the liver, it is of small consequence compared to the good resulting from free drainage in cases of empyema and cystitis of the gall-bladder from stenosis of cystic duct, or in cases of cholangitis and cholæmia from common duct obstruction which cannot be removed.

Choledochotomy and cholecystotomy are, unquestionably, ideal operations where they can be done. Cholecystenterostomy, with Murphy button, while it only relieves the consequences and does not remove the cause, has saved, and will continue to save lives, especially by tiding over desperate cases too feeble from sepsis and cholæmia to stand a prolonged operation.

In many of its details the technique of the operation of choledochotomy is still imperfect, but, in spite of this, it is an ideal operation in its conception, and a mortality of less than 18 per cent. is wonderfully encouraging as to results. In this as in other fields of abdominal surgery the point should be urged that fatalities are not due to the operation, but to the want of its early execution. While it is often impossible to make the diagnosis of cholelithiasis and its consequences, or utterly impossible, in many instances, to differentiate one morbid condition from the other, it is fair to assume that choledochotomy will be more than ever an ideal operation when we can diagnose gall-tract diseases before long-existing cholangitis and local peritonitis has bound down the duct, matted the parts in its neighborhood and poisoned the system by septic or cholæmic infection.

TREATMENT OF NÆVUS.—Dr. H. R. Wharton states the varieties of nævus most commonly met with are the capillary, the port-wine mark (a form of the capillary of some size), and the venous nævus of purple or bluish color and at times containing blood-cysts. All forms of vascular tumors in young children should be carefully watched, and if any increase in size be noted they should be operated upon. In cases of capillary nævus, cauterization with nitric acid, by means of a match-stick, may answer; electrolysis is also of service in the treatment. The treatment of the port-wine mark is by multiple incision. In the treatment of venous nævus various methods have been employed.—*Medical News.*

NORTH CAROLINA MEDICAL JOURNAL.

ROBERT D. JEWETT, M.D., EDITOR.

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This JOURNAL is published on the fifth and twentieth of each month, and any subscriber failing to receive his copy promptly, is asked to announce the fact to this office.

Cuts will be provided for any original communications (sent to this JOURNAL only) requiring illustrations, free of cost to the author.

Secretaries of County Medical Societies in the Carolinas are asked to furnish condensed reports of their meetings to the JOURNAL.

All communications, either of a literary or business nature, should be addressed to, and remittances made by P, O. Order, Draft or Registered Letter, payabel to ROBERT D. JEWETT, M.D., P. O. Drawer 810, Wilmington, N. C.

Editorial.

Medical Attention to the Poor.

How shall the poor be supplied with medicines that are necessary for their diseased conditions, and with the most economy to the county or municipality? This is a question which must be answered, although difficult, and which depends greatly on the size of the town.

In large cities, such as New York, there is a Bureau known as the "General Drug Department," which is under the direct supervision of the chief chemist of the Department of Public Charities. All of the hospitals and dispensaries obtain their supplies by requisition on this General Drug Department. However, this system is not adapted to any North Carolina town, and we must look to some more simple plan.

We do not know just what system is adopted in the city of Raleigh, but the Mayor of that city has recently had to call a halt on the too liberal distribution of "*expensive proprietary medicines*" to the poor. As the result of a called meeting of the Academy of Medicine to consider the matter, the physicians of the city have agreed to exercise greater economy in prescribing for this class.

In Wilmington bids are received by the County Commissioners for filling the prescriptions of the physician to the Out-door Poor only, which office is a creature of the Board of County Commissioners. These are now being filled for 10½ cents each, the contract, running two years and the county pays for prescriptions written by the physcian to the Outdoor Poor only. It is the practice here, when a prescription is written that runs above this established price, for the physician to turn over to the druggist sufficient prescriptions in blank to make up the price. This custom has not been generally known among the druggists, with the result that only one or two ever put in bids for the work. The system, properly conducted, is perhaps the most satisfactory and economical for small towns. The custom of writing duplicate prescriptions, however, to make up the price on an occasional expensive article, is wrong and unfair to the tax-payers. The druggist knows the average nature of prescriptions, and when he bids should estimate for the occasional expensive one. On the other hand, the physician, in writing his prescriptions for charity patients, should remember that the city is ministering to the *needs* of the poor and not to their *caprices.*

Providing for the attention of the poor at their own homes, as is done in Wilmington, is unsatisfactory, and we think that all those who are sick enough to be confined to bed, should be treated at the hospital. Treating them at home is very unsatisfactory in that their surroundings are nearly always unfavorable, and the patient is often left in the care of utterly ignorant and incapable persons, the administration of the remedies being entrusted to children in many cases. In fact, it is a farce, deluding the people into thinking that the poor are receiving proper medical attention, when the fact is far different. In this city only one physician is now provided for this work, at the paltry salary of $400 a year. At the rate of *twenty-five cents* a visit this allows for about thirty visits a week, while there are some seven or eight thousand who may claim his services. When it is remembered that in this service there is much obstetrical work, it can be readily seen that proper attention cannot be rendered by one man, even if the salary paid was sufficient to warrant him in giving all his time to the work.

In cities as large as Wilmington and some others in the State, we believe that the most economical and at the same time the most useful plan would be to treat all who are confined to their beds at the hospital, while those who are able to be about should be required to call at the office of the Charity Physician at certain hours each day, and there be examined and given either a prescription or a permit to the hospital. It might also be better that these prescriptions be filled at the hospital, where a druggist shall be provided. The dispensary of the hospital would be provided with drugs at wholesale prices and many prescriptions for which the county now pays 10½ cents would cost so little that the price could not be computed.

There is a class of patients who receive free attention and medicine who are not entitled to it. We refer to those suffering from venereal diseases. We think it a great injustice that the tax-payers should be burdened with the cost of helping these persons out of the trouble into which their own wilful meanness has gotten them. Of course they must receive attention, but some way should be devised for making them pay for the service. They should be charged up with the services rendered them at regular rates and be placed under arrest to work out the amount on the streets or in some public institution.

Reviews and Book Notices.

Practical Dietetics. With Special Reference to Diet in Disease. By W. Gilman Thompson, M.D., Professor of Materia Medica, Therapeutics and Clinical Medicine in the University of the City of New York, etc., etc. Cloth, royal octavo, 800 pages. D. Appleton & Co., New York, 1895.

In the wonderful laboratory of the animal body, with its complex chemical reactions and mysterious metabolic changes, what dreadful havoc must be wrought by some of the caprices of the modern civilized appetite. And when the incompatibilities and accumulation of waste products become more than nature can manage, she punishes the indiscreet person with disease in some shape. How important, then, it is, in attempting to cure disease, to give good heed to the warnings of nature and avoid those things which have caused or aggravated the trouble.

It is not enough to tell a patient to "be careful in his diet," to "not eat much meat," or to "avoid sweet or starchy food." If there are certain articles a patient should avoid, they should be written out for him, and a list made of allowable articles of sufficient variation to enable him to live in comparative comfort.

The instructions in the text-books on Practice are very unsatisfactory on this subject, and it is a satisfaction to have so complete and reliable a guide as the volume before us.

The scope of the work may be understood from a brief outline of the subjects discussed in the various sections. Part I. discusses foods and food preparation. Here we find, beside the chemical composition of the various classes of food, their relative value as force-producers, a comparison of various articles of food, and methods of preparation and preservation of different foods. Part II. treats of stimulants, beverages and condiments. Part III. takes up cooking, food preparation and preservation, and the quantity of food required. This is a most important subject, as much depends on the manner of preparation of food and its quantity, as well as its nature. Part V. studies food digestion and the conditions which especially affect digestion. The influence of temperature, exercise, rest, sleep and mental emotion on digestion is discussed, as are also the normal process of digestion and the elimination of food-waste. Parts VI. and VII. take up the general relation of food to special diseases and the administration of food for the sick. Part IX. embraces about 300 pages and is devoted to diet in disease. The diseases are classified as is general in works on practice of medicine. Under each disease the causation and pathology, as they may be related to the diet, are reviewed briefly and then the dietetic treatment is thoroughly discussed. Part IX., under the heading ing "Rations—Dietaries," gives the diets as used by the army and navy and in various prisons; also the dietaries of the leading hospitals. This part includes a chapter on infant-feeding and artificial foods. An appendix of recipes for nutritious dishes for invalids and an elaborate index complete this very useful work.

Clinical Lectures on Diseases of the Nervous System, delivered at the Hospital for the Paralyzed and Epileptic, London. By W. R. Gowers, M.D., F.R.S., Physician to the Hospital, etc., etc. Octavo, cloth, 280 pages. Price $2.00. P. Blakiston, Son & Co., Philadelphia, 1895.

The volume comprises twenty lectures which have, for the most part, been published in the various English journals and noticed in the journals of this country. The lectures are not classified, but are given at random upon such subjects as Syphilitic Hemiplegia, Acute Ascending Myelitis, Mistaken Diagnosis, Syringo Myelia, Neuralgia. Lead Palsy, etc.

The world-wide reputation of the author is sufficient guarantee of the excellence of the lectures. At ten cents each any physician can afford to read them and will derive benefit therefrom.

Abstracts.

NEUROTIC VOMITING.—(Dr. Robt. T. Edes, *Amer. Jour. of the Medical Sciences*). Vomiting is not a disease or even a symptom of disease of the stomach, nor any proof of the abnormality of its contents. It is a special and complicated reflex, involving the abdominal muscles, the diaphragm, as well as the muscular coat of the stomach, especially its cardiac orifice, with often vaso-motor and sensory irradiations having but little to do with the primary object of the act, which is, of course, to empty the organ usually, but not always, at the bottom of the whole disturbance. While this sensory irritation usually comes from the stomach, in a considerable minority of cases the act may be provoked by a sensory irritation starting from any one of many points other than the gastric mucous membrane.

Considering, on the one hand, the ease and frequency with which the single, or occasionally repeated, act of vomiting, may take place, and how often its effect is a conservative or beneficial one, it is not strange that it should excite no alarm, but often be looked upon as desirable. It is, however, more to be wondered at that long-continued, obstinate, nervous or functional vomiting should have received so little attention from systematic writers. In most works on general medicine but little is to be found beyond the mere statement that such a state of things may occur, with perhaps a more detailed description of "anorexia nervosa," which, however, is not exactly the same thing, and may be accompanied by little or no vomiting. One hardly finds a hint of its sometimes severe and even fatal results. The obstetricians are, however, better aware that the condition is not of so slight importance.

Fortunately, in the great majority of cases, it is true that the rejection of food is not constant and complete, and enough is retained not only to sustain life, but to justify the remark of Ewald that "the general nutrition suffers surprisingly little." If, however, this lucky failure does not take place, then the result is inevitable, and calling a patient hysterical does not enable her to live without food.

The nomenclature of these cases is not altogether a matter of indifference, inasmuch as it may have some influence on the mind of even the practitioner, and if not very carefully contrived is likely to lead to harmful misunderstandings between him, his patient and her friends. Until it is possible to relieve the words "hysterical" and "nervous" from a certain flavor of disapprobation and suspicion which still clings to them, or until we ourselves get rid of the habit of prefixing, at least mentally, the word "only" to these names, they should be used very carefully.

There is no symptom specially characteristic of functional vomiting. The presence of other neurotic symptoms, either together with, or even more conclusively if ceasing in order to give way to, an attack of obstinate vomiting, would not be proof positive perhaps, but in the highest degree suspicious.

The absence, during considerable time, of vomiting of blood would be a strong point in favor of a neurosis; but when it is remembered that a moderate hemorrhage into the stomach may not be thrown up at all, but pass away, possibly unnoticed, by the bowels, we are again left at fault.

On the other hand, repeated vomiting of blood would be more conclusive of organic disease than anything else, except the finding of an epigastric tumor. A single occasion of hæmatemesis, even if copious, is of much less value. Hysterical hæmatemesis is not very rare, and may or may not be a vicarious menstruation. If repeated at regular intervals, its purport would at once be evident.

As to the assistance to be gained by an analysis of the stomach-contents vomited or withdrawn by the tube, we find that, unfortunately, the hydrochloric acid is increased in nervous gastralgia as well as in ulcer. Complete absence of free acid has also been seen in cases of nervous dyspepsia, and might obviously lead to the suspicion of cancer. I know of no observation made in a case of exactly the kind described above, that is, where the vomiting is a much more prominent symptom than the pain; but it is possible that a persistent absence of hyperacidity, together with the painless vomiting, would be a significant combination.

The treatment of neurotic vomiting presents few points of interest, so far as drugs and diet are concerned, from that employed to check vomiting from other causes. Almost any of the medicines called gastric sedatives or antiemetics may prove useful, but nothing is specific.

In the matter of diet, it is perhaps less easy to find some one article which will always be well borne than when the vomiting depends upon organic disease. It is, however, desirable not to make the search too limited, for the appetite may be capricious, and the choice will depend more upon it than upon chemical composition. Any physician can tell queer stories of what patients can and cannot eat or think they cannot. The hospital patient, who has been carefully fed by the rectum or on predigested milk or the like dainties, steals his neighbor's fried ham and eggs and thrives thereon. The consumptive's stomach, which has for days rejected the most ingenious and artistic concoctions, quiets down under the indigenous baked bean, only to be again aroused by a delicate and very expensive bean flour called "Revalenta Arabica." The next effectual sedative is a piece o' good solid pound-cake.

Articles of diet called "bland" are by no means more universally acceptable to the sensitive or disgusted palate than a smile of the same character is to the perturbed spirit.

Variety and "little and often" are two good principles to bear in mind; but there is no rule which will not be found to have important exceptions.

The more food-preparations of any kind the physician is familiar with, the better. One may be retained when another is rejected, not because it is better, but because it is new.

The most important part of the treatment is by no means the easiest to formulate; I mean the moral control and psychical stimulus or sedation.

It must combine firmness with kindness, caution with boldness, and the whole with fertility of resource, common-sense and adaptability to the case in hand.

The act of voming is, to a certain very limited extent, directly under the control of the will; but much more completely is it, together with the whole process of digestion, indirectly subject to nervous influence.

How easy is it to disgust a sensitive person with any article of food by some unpleasant detail as to its source or the method of its preparation. It is certainly consonant with the views of hysteria held by some theorists that a fixed idea or some incident forgotten as to the ordinary consciousness, but retained in the "subliminal," may be constantly exciting the centres controlling the action of the stomach. In the second of the cases reported, it is more than probable that the idea of the patient that she was not going to get well had a good deal to do with determining the result.

If a patient believes that she must vomit she will do so. If, on the other hand, there are no nerve-endings in the gastric mucous membrane irritated by inflammation or neoplasm, no cells in the medulla to be compressed or poisoned, assurances that she need not and must not vomit, are of more value than bismuth, creosote or ice One gentleman proposes to check hysterical vomiting by the simple plan of bringing no basin.

Here, of course, is where the diagnosis is of supreme importance. The physician cannot give those hearty assurances of recovery with convincing vigor, nor exercise the necessary firmness in urging food, if he has a feeling that the patient may at any moment bring him to shame by a hemorrhage or a perforation, or her confidence be slowly undermined by the gradual development of a growth in the epigastrium.

He can feed her so as not to do harm in either case, and sometimes it may be that this is for a time all, until the diagnosis is established; and it is not necessarily any imputation upon the diagnostic skill of the practitioner that he may be obliged thus to temporize. It is not, however, until he can cut loose from the very limited bill of fare and assure his patient that the lactated milk or the malted glucose, to which her faith is pinned, is not her only hold upon life, and that it is time for her to enlarge her diet, that he is really reaping the benefit of a positive diagnosis.

Of the Coexistence of Chicken-Pox and Measles in the Same Individual.—(*Gazette des Hôpitaux*, June 15, 1895.) By Dr. Szczypiorski, of Longwy. The author reports 5 cases in which were observed distinct attacks of measles and chicken-pox. The eruption of chicken-pox appeared first in all the cases and had not entirely disappeared when measles manifested itself. Since chicken-pox may be accompanied by a scarlatinaform eruption, which is polymorphous and resembles the eruption of measles, it is necessary to establish the differential diagnosis. The differentiation in these cases was easy on account of the coexistence of the two diseases, by the accentuation of the oculo-nasal and bronchial catarrh, and by the evolution of the eruption. In doubtful cases the diagnosis ought to be made, if possible, for it is very important not to confound scarlet fever complicating chicken-pox with a scarlet rash occurring with that disease. It is equally important that the family be informed of the true meaning of the eruption.—*International Med. Mag.*.

The Meaning and Import of Casts in the Urine without Albumin.—(*Medical Review*, June 29, 1895.) By Dr. Ludwig Bremer, of St. Louis. A person who constantly or periodically passes urine containing casts, even without albumin, or perhaps with albumin in chemically demonstrable quantity, is not in good health. Such a person has a damaged constitution; his kidneys are, to say the least, vulnerable, and he is prone to contract and to succumb to other diseases. The irritative process which gives rise to the formation of casts may not amount to an actual state of inflammation, and there may not be the recognized signs of fully developed kidney-disease, and yet the subjective symptoms may be very pronounced. These symptoms are often unaccountable to the attending physician because sufficient importance is not attached to the presence of casts in the urine of such persons.

In a number of cases periodic, intermittent albuminuria is the feature, and the albumin is in evidence only when a nerve-storm of unusual severity has set in. Such patients may be considered to have vulnerable kidneys. For a long time such patients may not present any albuminuria, the casts only being demonstrable, or even these may disappear, and the urine be absolutely normal; yet there is a dormant pathological condition which may be aggravated into activity. The dignosis of vulnerable kidney may be doubted by other physicians. Aside from examinations which are based on chemical analysis exclusively, there are several reasons why the search for casts may be negative: first, microscopical incompetency; second, the kidney trouble may have become latent and the casts may be really absent; third, insufficient instrumental equipment—the centrifuge should always be used; fourth, the examiner, even if he find casts, may not attach any importance to them if unaccompanied by albuminuria. Among other reasons why the presence of casts in the urine is alleged to be compatible with perfect health is the finding of them in the urine of athletes after great muscular exertion. The athletes presenting this condition were certainly damaged men. The symptoms produced by this vulnerable kidney range over the neuroses, particularly neurasthenia, inexplicable gastro-intestinal manifestations and grippe symptoms, megrim and other forms of periodic headache.—*Int. Med. Mag.*

TREATMENT OF GASTRO-INTESTINAL CATARRH.—During the acute attacks of this disease the best treatment, according to Coyle (*American Medico-Surgical Bulletin*, 1895), is liquid food or very light diet, excluding meat, adding digestives, if necessary, and saline enemata of warm or cold water, preferably cold, with morphine internally, to relieve pain. Counter-irritation for pain is useless. The strength of the enemata may be varied from two drachms to an ounce of borax, bicarbonate of sodium or salt to the quart of water. Enemata should be given night and morning, and repeated whenever the patient feels a desire for movement of the bowels. These enemata serve to cleanse the rectum thoroughly of shreds and mucus and prevent the accumulation of foreign matter, which will occur if the rectum is not washed out. A purge, preferably a saline, should be given at the commencement of an acute attack. The watery movement caused by a saline purge assists in detaching the membrane, and relief soon follows. The citrate of magnesium, Rochelle salts, or the always reliable sulphate of magnesium may be employed for this purpose. Heat to the abdomen for relief of the pain is of little use. It may serve to impress the patient that something potent is being done for her, and, as these cases are generally impressionable women, moral effects must not be lost sight of. Rest in bed and quiet, in addition to the above measures, will shorten the acute attack. In the intervals between the attacks the diet must be restricted to those substances which give the patient no disturbances of digestion. Laxatives for the bowels, especially cascara in small doses, digestives, such as pepsin and pancreatin, whenever they appear to be necessary, and tonics for improvement of the general health, constitute the only efficient means at our command to render life endurable for these cases. In spite of all treatment, the patient will from time to time suffer from fermentation in the stomach. Sulphite of sodium, in from 5- to 10-grain doses after meals, does more for this annoying symptom than anything else. With our present knowledge, the disease must be classed as one of the chronic incurable diseases that do not furnish much comfort to the medical attendant, except as affording an opportunity for experimental therapeutics.—*Therapeutic Gazette.*

OFFICIAL LIST OF CHANGES IN THE PUBLIC SERVICE.

THE NAVY.

For the week ending September 21st, 1895.

September 14.—*Guest, M. S.*, Assistant Surgeon, detached from the "Minnesota" and ordered to the "Vermont."

Persons, R. C., Surgeon, detached from the "Minnesota" and ordered home and placed on waiting orders.

September 16th.—*DeValin, C. M.*, Assistant Surgeon, detached from the "Vermont," ordered home and given six months sick leave.

Bagg, C. P., Assistant Surgeon, ordered to the "Vermont."

Bertolette, D. N., ordered home and placed on waiting orders when the "Atlanta" goes out of commission.

September 19th.—*P. H. Bryant*, P. A. Surgeon, detached from the "Baltimore" and ordered to the "Petrel."

Arnold, W. F., P. A. Surgeon, detached from the "Petrel" and ordered to special duty in investigating the plague in China and cholera in Japan.

MARINE HOSPITAL SERVICE.

Banks, C. E., P. A. Surgeon, to proceed from Washington, D. C., to Vineyard Haven, Mass., for temporary duty, September 11, 1895.

Glennan, A. H., P. A. Surgeon, is granted leave of absence for five days, September 3d, 1895.

Wertenbaker, C. P., P. A. Surgeon, is granted leave of absence for three days, September 3d, 1895.

Houghton, E. R., P. A. Surgeon, is granted leave of absence for twenty-three days, September 12th, 1895.

Cofer, L. E., Assistant Surgeon, is granted leave of absence for seven days, September 3d, 1895.

WRIGHTSVILLE MEETING OF THE BOARD OF MEDICAL EXAMINERS.

The Board of Medical Examiners met in extra session at Wrightsville, August 26th. There were present, Drs. William H. Whitehead, L. J. Picôt, G. W. Long, J. M. Hays, J. M. Baker, H. B. Weaver and Thomas S. Burbank. All of the examinations were written, and the same grade of 80 per cent. required. There were twenty-one (21) applicants, and of these fourteen were granted license.

It may be of interest to show the colleges from whence the applicants obtained their degrees.

Drs. E. A., Moye, Greenville, D. E. Seviér, Asheville, J. T. Seviér, Asheville, W. P. Holt, Willardsville, Jefferson Medical College, Philadelphia; S. M. Mann, Manteo, College of Physicians and Surgeons, Baltimore; F. E. Hartsell, Concord, J. J. McCampbell, Morganton, Baltimore Medical College; W. L. Hilliard, Asheville, C. H. Barnhardt, Concord, Jefferson Medical College, Philadelphia; H. W. Carter, Fairfield, University of Virginia; C. J. Sawyer, Bellcross, College of Physicians and Surgeons, Baltimore; J. P. Millard, Asheville, South Carolina Medical College, Charleston: W. T. Fuller (col.), Reidsville, Leonard Medical College, Raleigh; B. R. Graham, Wallace, University of Virginia.

The highest grade was 96. This mark was made both by Drs. E. A. Moye, Jr., and B. R. Graham. The lowest was $54\frac{2}{7}$.

Board adjourned Friday night at 2 a. m.

Wm. H. Whitehead, M.D.,
President.
L. J. Picôt, M.D.,
Secretary.

Obituary.

Robert Battey, M.D.

In the death of Dr. Robert Battey, which occurred at his home in Rome, Ga., on the 27th of September, the South has lost a son who has done much to honor her before the world.

Dr. Battey was born in Richmond county, Georgia, on the 26th of November, 1828, and so was nearly sixty-seven years old at the time of his death. He graduated from the Philadelphia College of Pharmacy in 1856, and from Jefferson Medical College the following year. He filled temporarily the Chair of Obstetrics in the Atlanta Medical College, and was also editor of that excellent journal, the *Atlanta Medical and Surgical Journal* from 1873 to 1876.

He served during the civil war in the Confederate service, having enlisted as surgeon of the 19th Georgia Volunteers. He also had charge of various hospitals.

Dr. Battey was a distinguished

surgeon, possessing unusual skill and displaying much originality for the operative relief of various conditions. That operation which has made him most widely known and bears his name, was that for the removal of the ovaries, with a view to effecting a change of life in women. He hoped thereby to effectually remedy certain incurable maladies in women. He also devised, in 1858, a new method for treating club-foot, by the use of carved wooden splints and roller bandages. He has many difficult surgical operations to his credit, and was the third surgeon to successfully perform the operation for vaginal ovariotomy, which he did in April, 1874.

Dr. Battey was a member of the Georgia Medical Association, of which he was elected President in 1876. He was also a member of the American Medical Association and the American Gynecological Society.

He was married, in 1849, to Miss Martha B. Smith, and was the father of fourteen children.

Miscellaneous Items.

Under this head space will be given (free of cost) to those paid-up subscribers who desire to change their location, or to dispose of practice or property. One insertion will be allowed, but inquiries must not be ordered addressed to this office.

Any news connected with professional men and matters in North and South Carolina will be appreciated by the Editor.

We give on another page an official report of the meeting of the Board of Examiners, held at Wrightsville, in August. This report will correct an error that occurred in the list of licentiates in the issue of September 5th.

The death is announced of Dr. John A. Graham, surgeon at the Virginia Military Institute, Lexington, Va., aged 62 years.

The firm of Wallace Brothers at Statesville, Wholesale Dealers in Roots and Herbs, made an assignment, with assets of $75,000; liabilities not stated.

The drug firm of Renz and Henry, Louisville, Ky., has been dissolved. Mr. Henry continues the business under the name of Henry Pharmacal Company.

Dr. Albert L. Gihon, Medical Director in the United States Navy, has been placed on the retired list, after an active and efficient service of more than forty years.

At a recent meeting of the Trustees of Jefferson Medical College, Philadelphia, the honorary degree of LL.D. was conferred on Dr. John Collins Warren, Professor of Surgery in Harvard University.

The *Medical Record* learns that in Sweden and Norway a person cannot be legally married until after the production of a certificate of vaccination.

In a communication to *Garden and Forest* on the final outcome of the turpentine industry in the South, L. J. Vance concludes as follows:

"The American turpentine workers still continue to follow the old-time methods of tapping the trees for their sap. They have made few changes and have adopted few improvements. They cut a deep, broad "box" at the base of the tree, and then the surface above the box is laid bare. The trees are worked for four or five seasons, when they become practically exhausted of their sap. The forest is then abandoned to the elements, to the bark-beetles and pine borers, and finally, the splendid trees are blown, burned or cut down. The French turpentine worker cuts no deep box into the tree, but uses a pail, into which the resin or crude turpentine is conducted by a gutter. He makes only a small chip about three or four inches wide, and this is enlarged from time to time. After five seasons' working, the trees are given a rest of several years, and so, by alternating periods of tapping and of rest, a tree can be profitably worked for fully fifty years. The French also take measures to profitably regenerate their pine forests and to keep the trees strong and uniform.

"If our turpentine workers understood the first principles of forestry they would modify their destructive methods. With more knowledge, based on experience, the day will come when the Southern people will see that good husbandry consists in management, not destruction, of their forest resources; that some precautions and some protection are necessary against fire, as well as individual greed; that the present policy of the turpentine workers is lamentably wasteful and short-sighted; in other words, that it is more profitable to work the pine forests for fifty years, instead of five years; and, finally, that the lumber and turpentine industries, while changing the face of Nature, and even the climate of the country, are slowly, but surely, making loss and trouble for this and succeeding generations".—*Amer. Jour. of Pharmacy.*

RATIONALISM IN MEDICINE.—Dr. Alfred H. Carter says that the whole fabric of rational medicine rests upon a tripod, of which the three divisions are: clinical observation and study of the signs and symptoms of disease; study of the pathological seats and processes; study of remedies.—*Brit. Jour. of Dental Science.*

Blackbasse—How's your health this summer?

Laketrout—It was very good, I thank you, until the fishing season opened, but since then I've been troubled with worms, and at times I've been almost in seine.—*Ex.*

TROUBLES IN THE COMMUNITY.

The coal-dealer died of colitis,
  The twine-maker had the chord-ee;
The farmer's attack of oat-itis
  And rye-neck was painful to see;
The wheelman went blind with cyclitis,
  The bridge-builder suffered from piles,
The servant girl had Sal-pingitis,
  And the cook was all covered with b'iles.

—*Exchange.*

Reading Notices.

Notwithstanding the large number of Hypophosphites on the market, it is quite difficult to obtain a uniform and reliable Syrup. "Robinson's" is a highly elegant preparation and possesses an advantage over some others in that it holds the various salts, including Iron, Quinine and Strychnine, etc., in perfect solution, and is not liable to the formation of fungous growths.

A Superior Remedy in Vomiting of Pregnancy.—Gentlemen: About two years since I received from your representative, Mr. A. J. Shick, a sample of your preparation "Ingluvin." Have used it extensively in my practice and find it far superior to other remedies in vomiting in pregnancy, dyspepsia and in cases of indigestion. I am convinced that no other remedy can be prescribed that will act with the promptness of Ingluvin. Waldo Briggs, M.D.
St. Louis, Mo.

We know of few more aggravating occurrences than to try to dissolve a slowly soluble hypodermic tablet, especially when the case is an urgent one. The experience is quite general, we take it, that some tablets, while they are remarkably soluble when freshly prepared, soon lose this virtue and become hard and sometimes apparently almost insoluble. To prevent this deterioration many experiments have been made in the large laboratories of some of the prominent manufacturers, and several firms claim to have found the means of reducing this deterioration to the minimum. Among the most successful along this line of work is that old favorite Southern firm, Sharp & Dohme. How they accomplish it we do not know. What is of more interest to the practicing physician is the fact that their tablets dissolve almost instantly in a few drops of water.

Anæmic Patients who have Malarial Cachexia.—Dr. T. D. Crothers, editor of "The Quarterly Journal of Inebriety," published under the auspices of The American Association for the Study and Cure of Inebriates, and who is an authority on neurosis, writes in his last number as follows: "Antikamnia and Quinine are put up in tablet form, each tablet containing two and one-half grains of Antikamnia and two and one-half grains of quinine, and is the most satisfactory mode of exhibition. This combination is especially valuable in headache (hemicrania) and the neuralgias occurring in anæmic patients who have malarial cachexia, and in a large number of affections more or less dependent upon this cachectic condition.

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Original Communications.

REPORT OF SURGICAL CASES.

By DAVID T. TAYLOE, M.D., Washington, N. C.

INTERSTITIAL FIBROID—WEIGHT SIXTEEN POUNDS—SUPRA-VAGINAL HYSTERECTOMY—RECOVERY.

Mrs. H., aged 39 years, consulted me after having sought relief in many quarters in vain. The tumor was quite large and was first noticed ten years before. She was wasted about the chest and arms, like a case of old ovarian disease. The abdomen measured forty-two inches at the umbilicus. The tumor was firm and solid throughout, and as the result of spinal curvature in the lumbar portion, the growth was well pushed up under the sternum and ribs; no trace of the ovaries could be detected. For several years she suffered great inconvenience from œdema of lower extremities and embarrassed respiration as the result of pressure. Menstruation was always in excess, and for the last fifteen months was so profuse as to threaten life at times. Her life prospects were anything but bright. I operated on her in a private house under antiseptic precautions as nearly as I possibly could under the circumstances. Ether was given. The first incision measured eight inches. On the right side the broad ligament rose high up on the tumor; the left broad ligament was largely spread over the half of the tumor as high up as the ribs. The opening was then enlarged four inches, and by hard pushing and patience the tumor was moved forward as far as its connection on the left side would permit. The ovaries were so embedded in the tumor they could never have been removed. The right broad ligament was transfixed by silk sutures, secured and divided. All bleeding from the tumor was prevented by strong locking forceps. The fibroid was now more easily dealt with. It was drawn forward and the left broad ligament treated in the same way. I now applied a strong wire ecraseur around the cervix, low down, and

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*Read before the North Carolina Medical Society, May 15, 1895.

the whole mass was cut away, the stump showing a section of the cervix in the center. Owing to many adhesions there was much trouble in finding some bleeding points among the loose cellular tissue of the huge gap now left. Secondary hemorrhage into this loose tissue was not one of the smallest risks of the operation. All the parts were now wiped dry with hot carbolized sponges and the wound closed with silk sutures down to the stump in the lower angle of the wound. The first day was passed fairly well, pain relieved by injections of morphia. Temperature was never above 101.° and pulse never above 120. Each day I would tighten up on the wire until the thirteenth day, when it cut through, leaving a healthy wound, which healed beautifully by granulation. The pulse and temperature were now normal.

Eight weeks after the operation she left for home. She is now a strong woman in perfect health and can do anything. For valuable assistance I wish to thank some of the local physicians of my town.

REMOVAL OF UTERINE APPENDAGES FOR DISEASE.

Miss T., aged 29; for the past eight years gives a history of suffering constant distress in the pelvis and the back.

Examination.—Appendages enlarged, sensitive and low down in Douglas' cul-de-sac; she said her sufferings were indescribable; that her pain continued all the while, but her agonizing distress commenced some days before menstruation and continued during the period. She is extremely nervous and irritable, with a feeble pulse and in an exceedingly low state of health. Her suffering was so great during the period, I administered injections of morphia, and, after several days of suffering, she looked as if she had been through a long spell of sickness—pale, feeble and care-worn. Knowing she had been treated regularly by good physicians without any improvement, and nothing gave relief; it was evident there was but one way to help her; so, after proper preparation and thorough antiseptic precautions, I removed the uterine appendages. There were considerable adhesions and great difficulty in removing the structures. The patient did well, and at the end of five days was apparently relieved; had no more suffering, and now says her health is excellent; has gained her flesh and is able to work.

Mrs. K., aged 40 years; has suffered many years; in bed great portion of the time. The patient was weak, emaciated and anæmic; she complains of constant pain in the pelvis and bearing down. For the last three years has had at intervals severe uterine hemorrhages and says that during the last eight months she has had a constant flow with hardly a day's intermission. The patient was extremely nervous and hysterical. Laparotomy was performed. The appendages were removed. The ovaries were cystic and the tubes in a high state of inflammation.

The patient made an excellent recovery without a bad symptom. She says she has not been as well in fifteen years.

Mrs. S., aged 42 years; has suffered at intervals for the past seven years with intense pain over the region of left ovary and in the back. For the past ten months the pain has greatly increased at the menstrual period, radiating down into the left hip. She was no longer capable of attending to her duties and was becoming a confirmed invalid. In this case it seemed manifest that the only way to relieve the patient from continued suffering and chronic invalidism was to remove the hopelessly diseased structure. Laparotomy was performed. I removed the left ovary and tube. The right ovary seemed all right and in good condition, and I was glad to feel justified in leaving it.

The patient recovered without a bad symptom. Temperature was never above normal. Her general health is now very much better in every way, though I must say, in the third week after the operation, the pain returned in the left side, though not severe. I believe now, by the use of massage and time, she will entirely recover, as the operation has only been performed a short time, and at the time of operating there were many adhesions; ovary was atrophied and tube chronically inflamed.

In the cases I have reported the uterine appendages were removed on account of their diseased condition. The success in these cases I attribute to (1) antiseptic technique; (2) no loss of time while operating; (3) provision against shock, as I am quite certain prolonged anesthesia and manipulation within the peritoneal cavity swell the list of mortality.

A. J., aged 19 years, presents himself with the following history: Fourteen months ago had tibia and fibula of one leg broken at lower third by a carry-log running over his leg. A physician set the broken limb in plaster of Paris. The pain was intense that night, and the patient became restless. The next morning he noticed the plaster had cracked and become broken in places. No doubt at that time the bones were separated and became misplaced, not having any support. A neighbor was called who adjusted splints the best he could. Since that time the boy has never been able to put that foot to the ground or even to stand or walk upon it. Upon examination, I find a shortening of that leg two inches; the limb terribly deformed; both tibia and fibula overriding each other; he was totally unable to use it. I decided to operate and save the leg if possible. I cut down over the seat of fracture; found I could not break the bone over, as union was so complete. I sawed the bones in an oblique manner half an inch off each end of tibia and fibula. I then divided the tendo Archilles to overcome muscular contraction; then, finding I could adjust the bones in position, I drilled three holes through the tibia on either side and through the fibula. I then used stout gatgut to suture them together, put the leg in proper position, sutured the external wound with silk and dressed with iodoform gauze. I then applied plaster of Paris from knee to toe. The boy rallied promptly from the anesthetic, which lasted two hours. I gave iron as a tonic. His appetite was good throughout the entire time of his confinement, which was three months. His temperature and pulse scarcely went above normal, and as the resul of operation the deformity is entirely overcome—shortening one and one-half inches, which is made up by a thick sole on his shoe. He is now able to walk and go where he pleases. This eight months after the operation.

SOME PRACTICAL HINTS DRAWN FROM AN OBSERVATION OF FIFTY YEARS CONCERNING THE MANAGEMENT AND TREATMENT OF PULMONARY PHTHISIS.

By A. B. Pierce, M.D., Weldon, N. C.

For all practical purposes I divide pulmonary phthisis into tubercular and catarrhal consumption. And I remark that both may, under certain circumstances, be tubercular and catarrhal, and catarrhal may exist alone without the tubercular, but both more or less partake of the same symptoms before a fatal termination is reached.

As to whether the tubercular diathesis is dependent upon a specific germ, I shall not discuss, but give it as my opinion, from all the lights before me, that it is. It does not follow, however, that the other form, catarrhal, is dependent upon the same cause. That the catarrhal may exist without being dependent upon a specific germ, is equally clear to my mind for the following reasons: Previous to the changed condition of the colored race there was not one case in several thousand where consumption was ever developed in that race of people. So prevalent was this sentiment among the profession, that an eminent physician of Halifax county, in the forties, gave it as his opinion in court that he never knew a negro to die with consumption. Though this may have been an extreme opinion, yet, by almost universal consent, the profession was a unit on that subject, that it was the rarest occurrence for a negro to die with consumption of the lungs. But this, you may say, proves nothing, as the germs may have been there, but the circumstances were not favorable for their development. This would be begging the question, and as such the position would not be tenable.

With regard to the contagiousness of the disease, the evidence seems to favor the opinion, to a limited extent, especially the tubercular form. I am disposed to think, however, that too much stress is laid on the germ theory of the disease, and consequently inconvenience and erroneous views very often arise from the enforcing of such ideas.

The germ theory of disease is very often a cloak for ignorance and a want of observation and clinical experience.

If the germ theory be correct in all cases of consumption, it would seem natural to find out the germicide and apply the remedy, and thereby you have accomplished a great deal towards solving the problem of curing consumption. Common observation and common-sense teaches us that something else is to be done in order to ward off the attacks of this dire disease.

As I have already hinted, the negro race are peculiarly liable, since their changed condition, to what we term catarrhal consumption. I can account

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*Read before the North Carolina Medical Society, May 15, 1895.

for it in no other way than their changed condition. Whereas they were well fed, well clothed and slept mostly with plenty of air to aërate the lungs, and took plenty of exercise, sleeping a good deal in the open air. They are now ill-fed, badly clothed and crowded in ill-ventilated houses to sleep, thus creating bad and insufficient nutrition and reducing the vital forces below the normal standard of health. In this way the system falls an easy prey to mal-nutrition and irregular habits.

Since this change in their condition I have seen whole families die out with this condition of system, when I could account for it in no other way. Mal-nutrition, produced from cold and hunger, I consider the cause of the whole trouble. I notice that females are more liable to this condition than males, due partly, I suppose, to that condition of system peculiar to the post-partum puerperal state.

Another reason why more females are attacked with this disease than males, is that the most of them have become perfectly thriftless and lazy, thus fostering a condition of system favorable to the development of such diseases.

It is truly alarming to witness the number who are annually dying from what we term catarrhal consumption. I can see no remedy for this state of things but a return to industrious habits and a change of diet.

The remedy for these evils next demands our attention. As to the negro population, I see no remedy so long as their condition is unchanged. The better portion of them, who are thrifty and industrious, may improve, but they are very few.

As to the treatment of pulmonary phthisis, I regard it as more preventive and palliative than anything else. At no time is the aphorism, "Throw physic to the dogs" more true and appropriate than when applied to the treatment of pulmonary phthisis. In the first place, I lay down some general rules: Studiously avoid everything that would disorder the digestion, such as cough mixtures and the like, and take nothing that would lower the vitality of the system or prevent the highest type and best grade of nutrition. Climate, it is true, has something to do with the treatment of the ailment, but in order to be effective it must be utilized in time, before the vital forces are lowered too far.

A high, dry atmosphere, combined with the inhalation of pine fumes, is doubtless conducive to the healthful state of the pulmonary vesicles. A seafaring life and horse-back exercise I regard as the most favorable conditions to promote the due performance of the functions of the lungs. But few, however, can avail themselves of these remedies, and we have to resort to other treatment in the majority of cases.

The use of the cold bath, with proper restrictions, I regard as one of the greatest preventives to the progress of the disease. I do not go as far as some in recommending ice-cloths to the chest. The shock to the heart in delicate persons is too great, and I regard it as a hazardous remedy; but there is a way gradually to apply the cold bath to the chest and lungs which is not at all hazardous.

My plan is to wash the head and neck and whole chest daily with cold water, with the naked hand, which will enable you to apply the remedy without the shock to the system which results when it is applied in other ways. That system of exercise that expands the chest most and exposes the most breathing surface to the oxygen of the atmosphere, I regard as the most salutary and effective treatment for consumption of the lungs. Some cases of tubercular consumption of low vitality and feeble circulation may be benefited and life prolonged to an indefinite period by the moderate use of pure corn whiskey at each meal, and the only objeetion to the remedy is the danger of forming the habit of drinking and continuing the treatment too long and in too great quantities. It is not adapted, however, to all cases of tubercular consumption, and especially not to cases of catarrhal consumption. There are certain occupations and professions that should never be engaged in by patients having weak lungs or consumptive tendencies. Engage in no employment where close confinement in-doors is imperative and where fine particles of dust or cinders of any description are a part of the breathing atomosphere. Avoid all occupations that do not afford plenty of fresh air and exercise. If you are a book-keeper, you must quit the desk and seek the pure air of heaven. If you are a professor or teacher, you must quit the books and benches and revel amid nature's volumes and seats prepared in the forests and fields for God's creatures who are wearied and burdened with care.

To sum up the treatment of consumption in a few words, I would give the following directions:

1. Eat all the nutritious food that your stomach will digest.
2. Take all the out-door exercise your physical strength will admit of.
3. Breathe all the air your lung surface will admit without pain.
4. Employ your time in some agreeable occupation that will keep your mind from yourself and your disease.

Outside of a sea-faring life, I know of no employment more conducive to the health of a consumptive than the profession of a country doctor. A good horse, bridle and saddle and a pair of medical bags forms his armamentarium, and if he plies them well, he will be placed in the most favorable condition to enjoy health and a good conscience. Your humble servant is an exemplification of what he preaches. Two of my uncles and a sister died of pulmonary consumption, and until I was 35 or 40 years of age I only weighed from 125 to 130 pounds, threatened all the time with pulmonary trouble; but, adopting the treatment I recommend, I weighed, before I was 50, 170 pounds, and now I have passed my three-score years and ten, and am still practicing medicine in the country—a country doctor.

GOOD DRINKING-WATER *VS.* MALARIA—TWELVE MONTH'S EXPERIENCE WITH MALARIA ON ROANOKE RIVER.

By George H. West, M.D., Weldon, N. C.

This is a subject pregnant with interest to the general public as well as to the medical profession. It has been the generally accepted opinion of the profession for years, and I may say until 1886, that the poison of malaria was gaseous in character. Since that time a complete revolution has taken place, by the aid of the microscope, through the labor of Laveran and numerous other investigators, who have corroborated his testimony; and from these scientific investgations, it is generally conceded that "malaria is due to the introduction of plasmodium malariæ into the system," and to prove that this poison is taken into the system through the medium of drinking-water will be the object of the following remarks I shall offer for your consideration.

From the remotest antiquity swamp-waters and others of a similar character have been regarded as unwholesome and productive of febrile diseases; but since the time of Lancisi the theory of a malarial exhalation from a rich soil absorbed into the system from the air, has been accepted by the profession as explanatory of all cases which occur, and the possibility of the transmission of the poison or disease-essence by water, because forgotten. Vestiges of the old doctrine remained, however, in all malarious countries, not so much in the professional mind and literature as in the opinions of the people. The natives of malarial sections very generally continued to regard an impure water as the cause of paroxysmal fevers, and medical men from time to time suggested the possibility of the transmission of such diseases by the water supply or recorded instances where the supply was conceived to be connected with the appearance of a localized epidemic.

I shall offer only my own experience and observation during my twelve months residence as physician to the State Farms on Roanoke river. When I assumed control of the medical supervision of the convicts, May 9th, 1894, I found malarial diseases quite prevalent, in fact, almost to the exclusion of all other diseases. On Halifax Farm, situated three miles from Weldon, I found sixteen cases of intermittent fever in the wards of the male and female hospitals. On Northland Farm, two and a half miles from Halifax, directly on Roanoke river, I found eleven cases of intermittent fever, and from examination of case-book of hospitals on both farms I found malarial trouble prevailed during the months of January, February, March and April. This state of affairs still continued until I began to investigate the source of the water supply. From January 1st until August 31st there was a force of convicts working on the dikes of Roanoke river, on Northampton Farm, directly opposite the town of Halifax, using spring water, and in the month of June (the force averaging 70 men) there were thirty-nine cases of intermittent and one of remittent fever. From the 1st to the 31st of August I had the drinking water carried from the quarters, two miles distant, in barrels, and strange to relate, not a single case of malarial trouble occurred. After this time, the force having completed the dike, were put to work on the farm, using spring water on different parts of the plantation, and, as the result, intermittent fever again manifested itself.

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*Read before the North Carolina Medical Society, May 15, 1895

On several places on this farm they have driven pumps, and when I could get the overseers to get their water supply from *them*, which necessitated a little more trouble and distance to carry, the change was very gratifying and the sickness amounted to almost nothing.

On Halifax farm, from January 1st until May 1st, 1894, there were fifty-one cases of intermittent fever; from January 1st to May 1st, 1895, five cases. This result I attribute to water used from driven pumps.

On Northampton farm, from January 1st until May 1st, 1894, there were one hundred and twenty-one cases of intermittent fever; from January 1st to May 1st, 1895, thirty-two cases. Prior to May, 1894, there were several cases of hemorrhagic malarial fever, or, as the natives term it, "*yellow chills*," among employees and convicts on Northampton farm, and one last August, which proved fatal, on an adjoining farm. I did not see the case (not doing any private practice), but I learned the water supply was derived from springs and surface wells.

On the 1st of June, 1894, the Roanoke Rapids Power Company hired fifty-five convicts from the Penitentiary authorities to do some excavating—digging a bulkhead to convey the water from the canal to the river, furnishing the water power for two large mills that are now in course of construction. Unfortunately, the camp was located in a very unhealthy situation between two canals and a low, marshy bottom on the east, subject to overflow from Roanoke river. I will say here that I had nothing to do with the location of this camp, and after I was assigned to the medical care of the same I protested against the location, as figures will show.

For the first month there were thirty-one cases of intermittent fever, eleven cases of dysentery and twenty of diarrhœa. I was fully aware that in organizing a new camp, with men fresh from the Penitentiary, the greater portion not accustomed to work, being sneak-thieves and loafers around the town, there would be more or less sickness until they became accustomed to the work, but I was not prepared to find this amount, and I began to think the trouble must be due to the water. After investigation, I found they were using water from a spring and an open shallow well. This I ordered stopped, with a very gratifying decrease in the amount of sickness for July.

Since then the health of the camp has steadily improved and I seldom have intermittent fever to contend with. I am not a prophet nor the son of a prophet, but I predict, and that in the near future, the malarial problem will be solved simply by the use of good drinking-water.

DYSENTERY.*

By James A. Burroughs, M.D., Asheville, N. C.

The propitious season for the various diseases of the digestive tract is with us, so we propose to offer a few ideas on dysentery, as this is the one trouble of all diseases of the alimentary canal, that gives the physician the greatest amount of care and anxiety.

The term dysentery is used to designate an inflammatory disease of the large intestines, characterized by nausea, cramps, frequent dejections of mucus and blood, followed by tenesmus.

Dysentery may be acute or chronic. The acute is either sporadic, endemic or epidemic. Simple, acute, sporadic dysentery is generally preceded by loss of appetite, slight fever, acceleration of heart's action, abdominal pains with loose, watery, feculent stools. After the establishment of the characteristic dysenteric stools fecal matter is practically absent and tenesmus and cramps increased, with all the symptoms aggravated, with more or less prostration and yielding up of the vital forces, according to the severity of the case and the previous physical condition of the patient.

The severity of the disease, in the majority of instances, is in proportion to the quantity of blood and mucus evacuated and constancy of the tenesmus.

Large bloody stools, with persistent tenesmus and nausea, will exhaust the vital powers of the strongest in a short time, to be followed by collapse and death.

Some of the predisposing causes to dysentery are, seasons, atmospheric changes, high solar temperature, bad hygiene, age, diet and neglected diarrhœa. Summer is the season when dysentery prevails in the greatest degree and is most fatal; June, July and August are the months when the largest number of cases occur, and during which there is the highest mortality. Elevation of temperature in the hot months is the chief cause of the prevalence of the trouble and great mortality, especially in children. It is true that sporadic cases of dysentery can and do occcur at all seasons and in all climates, but it never appears in epidemic form except during the hot months, with a high solar temperature. Little of the trouble is observed in this pure, high, dry atmosphere. Its home is not here, it belongs to the impure, polluted air of over-crowded cities and the damp, boggy lowlands of the swamps and rivers.

When the physician is called to a case of dysentery the stomach and bowels are, in the majority of instances, freed from undigested food and fecal matter by the previous vomiting and purging. We find the gut in an acute catarrhal condition, exuding serum, mucus, blood and pus, with numerous and rapid multiplication of bacteria, causing a fermentation and regeneration of gases. The mucous membrane of the rectum is irritated and swollen, producing great pain and tenesmus.

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*Read before the Buncombe County Medical Society, at Asheville, N. C., August 5, 1895.

Various plans of treatment have been in vogue, from the old-time venesection with leeches to the rectum, down to our modern practice, rest and antisepsis.

The India or ipecac treatment has done poor service in my hands, without the addition of a hypodermic of sulphate of morphia with atropia, to hold the stomach quiet until the ipecac was absorbed. In justice to ipecac, with the above suggestion, I feel warranted in stating that, in the year 1884, it was the means of saving a young man's life in my practice.

The rational and successful plan of treatment consists in rest, alkaline antiseptic enemas and diet.

The first thing to do after placing patient in bed is to give a large, hot soda-water enema, impregnated with turpentine, turn the patient on left side, passing the small tube well up into the rectum, if needs be, by the sigmoid flexure. As soon as the enema has passed give a hypodermic of the sulphate of morphia and atropia. In about six hours the effects of the hypodermic will begin to wear off and the tenesmus return with the characteristic discharge. We give another large, hot soda-water enema with menthol, grains xxx, followed by a hypodermic, as before. These large, hot soda-water enemas, alternating with the turpentine and menthol, are used every six hours, followed by the usual hypodermic; it is necessary to have these enemas very hot, as we get a greater sedative and astringent action. The large enemas, as above described, if carefully administered, not only remove the gases, debris and all effete, irritating material from the diseased bowel, but practically disinfect and sterilize the canal.

It is a source of pleasure to note the thermal record after these enemas. Before the menthol enema is completed the patient will tell you that the bowel is turning into ice and that he is getting cold and can taste the menthol; with this they lift large quantities of gas from the stomach, which, they insist, is the menthol that has come entirely through, and I guess they are correct, as menthol is the most penetrating and permeating antiseptic that we have. Menthol seems to have a special, I may say, specific, action in dysentery, and the practitioner who uses this drug as above described, will not be disappointed.

Turpentine is a good and reliable antiseptic, and given in this way is placed in direct juxtaposition with the diseased mucous membrane, where it belongs, producing the effect desired with more certainty and promptness than when administered by the time-honored way of the mouth.

Two large tablespoonsful of soda bicarb. will render the enema sufficiently alkaline to counteract the acid discharges.

Absolute rest in bed is imperative from the beginning in every case, no matter how mild it may be. The patient should never assume the sitting posture, but use the bed-pan on all occasions. Straining in the sitting posture irritates the disease and aggravates the tenusmus, besides there is great danger of heart-failure.

The hypodermic of morphia and atropia eases the pain, quiets the stomach, placing the bowels at rest, greatly lessening the number of stools.

Judicious feeding of these patients is of great importance and often taxes the knowledge and skill of both physician and nurse. Such food as is digested in the stomach only should be given. Skimmed peptonized milk may be administered at suitable intervals after the first twenty-four or thirty-six hours. After twenty-four hours more, in connection with the milk, eggs may be taken, from two to four each day, as may be practical. No other food should be administered for at least three days after all signs of the colitis has subsided.

Papoid, scaled pepsin and bismuth sub-nitrate are the only drugs indicated in this trouble, and a powder containing these three, administered every four hours, is all that I ever prescribe by the mouth—this powder being especially indicated when complicated with gastritis.

To control fever, each of the coal-tar products are contraindicated and the ice-bag and sponge bath are amply sufficient and the only safe, scientific and practical way to hold a temperature below the danger line.

If the heart's action is feeble and the patient pretty well exhausted, use French brandy "Hennessee XXX;" this will give you the best satisfaction of all the alcoholic and heart stimulants combined.

If much tympanitis and tenderness of bowels exist, frequently repeated turpentine stupes will prove beneficial.

When the tenesmus is very great, with a tendency to prolapse of rectum, I have found it necessary to apply a weak solution of cocaine every three to four hours and to keep the bowel constantly pushed back by means of ice pressed to the anus.

In one case that I remember this was practiced more than a week with success.

I will add that in very young children it is sometimes expedient to administer the opiate paregoric by the mouth, but if you will only make the dose small enough, morphia and atropia may be advantageously given hypodermically to a child, it does not matter how young.

In conclusion, I wish to note a fact that I have observed, and, so far as I know, no writer has recorded, namely, there is a decided tendency to peritonitis in very young girls when menstruation occurs during the first few days of dysentery. I have had three well-marked cases of peritonitis from this cause in girls under 15 years of age, and feel quite sure I should have had others had I not profited by the above experience.

Selected Papers.

SOME FORMS OF ERUPTION SIMULATING SCARLATINA.

By A. D. Blackader, M.D., Montreal.

In presenting the notes of the following cases to this Society I feel that an apology is in order. There is nothing new in what I have to say, and probably were I to search the columns of our medical journals for a few years back, I might find cases similar to the ones I now present to you.

My chief object in writing, when I proposed the paper, was to emphasize the fact, recognized, I admit, in some text-books, but very much overlooked by the general practitioner, that the mere presence of a scarlatinal rash, going on to desquamation and associated with pyrexia, does not of itself warrant the diagnosis of scarlet fever, not even although it should present a certain amount of superficial tonsillitis. Cases will occasionally arise in which, with our present knowledge, an absolute diagnosis is impossible until some days have elapsed. In such the public should be educated up to the necessity for caution and to the recognition of the difficulties that may occasionally lie in the way of prompt decision, and at the same time the physician should be extremely cautious for the first few days lest he too rashly condemn a child to a six or eight weeks' quarantine and a family to all the suspense and worry connected with such a procee ing, when caution, time and frequent careful observations on the course and exact symptoms of the attack, might make it evident that prolonged isolation was unnecessary. Moreover, every hospital, especially every infectious hospital, should have numerous isolation rooms where doubtful cases can be detained for a time until the diagnosis becomes absolute. On receiving the programme for the meeting, however, I found I was put down for a paper on *form of eruption simulating scarlatina.* I have, therefore, slightly altered the arrangement of my notes to make them correspond more exactly to the subject allotted me.

Among the simplest scarlatiniform rashes, and among the least liable to give rise to serious difficulty in diagnosis are the scarlatiniform erythemata which occasionally result from the administration of certain drugs.

That an erythema closely resembling scarlatina may be produced by belladonna is acknowledged by all, but it is perhaps not so often seen as we might expect, considering the heroic doses in which the drug is occasionally given to children. A case in which this erythema was particularly well-marked occurred recently in Montreal, for the notes of which I am indebted to my friend, Dr. A. S. Wade:

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*Read before the American Pediatric Society, Virginia Hot Springs, May 28, 1895.

On the 7th of this month he was called to see a child 5 years old who had eaten surreptitiously fifteen sugar-coated granules of atropine, each containing one-one hundred and twentieth of a grain, in all one-eighth of a grain of atropine. On arrival he found the child in convulsions with skin dry and hot, and completely covered, literally from crown to sole, with a diffuse bright scarlatiniform rash, punctate in character, disappearing momentarily on pressure and leaving a distinct white line after the finger-nail drawn rapidly over it. The pulse was 160, weak and compressible. Before the convulsion the child had been delirious and the pupils widely dilated. Under careful and prompt treatment the symptoms abated, and on the doctor's visit on the following morning, the rash had faded and the child was running round.

Salicylic acid and its compounds are more frequently credited with producing an urticarial rash than a scarlatiniform erythema. The following are the brief notes of a case in which a rash distinctly scarlatiniform in character was apparently due to this drug:

John H., aged 17, an anæmic lad, entered Montreal General Hospital, April 29th, suffering from ill-defined rheumatic pains and very slight pyrexia. Under a few days rest in bed these passed away, and he was placed upon a preparation of iron. Following a sudden change in temperature a recurrence of the rheumatism took place, for which sodium salicylate, in fifteen-grain doses, was ordered. On the third day he complained of a feeling of fulness in the head, while on the neck and shoulders, upper part of chest, and the flexor surfaces of the arms appeared a diffuse erythematous rash, By the following day the character of the rash was more pronounced. It covered all the trunk, extending as low as the inner surface of the thighs with a distinctly scarlatiniform erythema. On the forearms and lower part of the thighs it presented the appearance of scattered, slightly elevated, round or oval spots, most of them of rosy color, but some of them with paler center, more urticarial in appearance, and in places tending to coalesce. There was no pyrexia, the tongue was clean and the throat normal. The salicylate was now stopped and *post* or *propter* the rash faded, so that the following day it had almost disappeared. No desquamation was noticed.

The rashes of phenacetin and phenazone are generally too patchy in character to give rise to any suspicion of scarlatina. The following case, however, which I attribute entirely to the action of the drug, gave rise for some hours to fear lest it might prove to be scarlatina.

Laura T., aged 4 years, of neurotic temperament, and with a skin sensitive to slight irritation, was taken ill in the afternoon of April 11, 1893, with vomiting, severe headache and pain referred to the right side. The child had been out for a long drive the previous afternoon with a sharp northeast wind blowing. I saw it about 3 p. m. and found a temperature of 101.5° F., pulse 120, respiration 26 and tongue slightly furred. The bowels previously had been quite regular, so a simple saline was prescribed. In the evening I found the child very restless, complaining of headache and pain in the side, but of both rather indefinitely. Careful examination revealed little beyond feeble breath sounds; the temperature was 102.8° F.; the pulse-respiration ratio was not much disturbed. I prescribed a four-grain phenacetin powder. Early next morning I received an urgent message that the child was covered with a rash and that the mother feared scarlet fever. I found the child easier, but the neck and upper part of trunk was covered with a distinct red rash resembling scarlatina. At the lower edge of the rash and on the lower limbs small round oval, erythematous spots appeared with definite and slightly raised margins. The tonsils were reddened, but not the soft palate. The temperature was 102° F., the pulse 108. By the afternoon the rash had begun to fade. A painful cough developed, and by the following morning indications of a distinct effusion were present on the right side. It ran a very rapid course and I had to perform paracentesis on the sixth day owing to rather alarming pressure symptoms. I may add that in this child quinine, on two separate occasions, given in small doses, produced an urticarial rash.

Copaiba may also in my experience give rise to a rash which may in some degree resemble scarlatina.

Many other drugs are reported as having produced a scarlatiniform erythema. Among the more important are oil of turpentine, iodoform, arsenic, chloral hydrate, mercury, santonin, ipecacuanha, sulphur, strychnine and iodine. I have not seen myself a case resulting from any of these.

In an allied group to the rashes produced by drugs we may place those transitory scarlatiniform erythema due probably to the accidental absorption of some toxin from the alimentary canal or elsewhere.

Amongst these I should place the erythema which has been occasionally observed to follow the use of enemata. Several cases are recorded in which, within a few hours after the administration of a simple soap and water injection, a distinct scarlatiniform rash has made its appearance, at first about the neck and shoulders, and has then spread from above downwards over a large surface of the body; this rash persists for a variable period, is never accompanied by pyrexia, but is generally followed by desquamation. Transitory erythematous blushes or distinct rashes, are also occasionally noted in connection with cases of tonsillitis and diphtheria and in septicæmic conditions in children.

The following is a very marked case, possibly due to a somewhat similar cause, which occurred in the family of my *confrère*, Dr. Gordon Campbell, of Montreal:

W. C., female, aged 21, was suffering from pleurisy on the left side with effusion. On April 9th, the eleventh day of the illness, the amount of the effusion was at its maximum, reaching as high as the third rib anteriorly. There were no symptoms of interference with the circulation or respiration.

That evening the patient complained that an eruption was coming out on her face and neck. On examination by gas-light, nothing was evident beyond a little roughening of the skin and flushing of the face.

On the following morning a rash extremely like that of scarlet fever, if not identical with it, was present all over the body, but more intense on the back and upper parts of the trunk. It was of a brignt scarlet red color, and, on close examination, showed a punctate appearance on a uniformly red ground. The skin was not roughened, and, on drawing the finger-nail across it, a white streak was left for an instant. The throat was not injected, nor did it feel at all sore or dry to the patient. The temperature, which had been 100.6° F. for the previous two days, remained the same. There were absolutely no symptoms referable to the rash except slight itching, which came on in the evening and was more pronounced the following day. The eruption persisted for five or six days, was quite as intense the second day as the first, and then gradually faded, remaining longest on the back. Desquamation consisting of fine branny scales was noticed as occurring on the face and legs and persisted for seven weeks. This patient had scarlet fever in infancy, and my friend was so positive of his ability to exclude definitely any form of infectious fever, that he allowed his own child, ten months old, to frequently enter and remain in the room with the patient. No treatment was employed. The patient was taking at the time triturates of strychnia, gr. $\frac{1}{50}$, three times a day, and was allowed to continue with them. There was nothing in the food taken which could possibly appear as the cause of the rash. Both diet and treatment had remained unchanged for the week previous to its appearance. Notwithstanding the rash, the patient made a rapid, uninterrupted recovery from the pleurisy.

Much more liable to give rise to error are occasional cases of erythema roseola, which, although generally resembling rubeola, does occasionally in children assume over the greater part of the body a distinctly scarlatiniform appearance. These cases, associated as they may be with a slight elevation of temperature and quickened pulse, may give rise to some anxiety. The rash, however, is very transitory, and I do not remember having ever seen a case where it was uniformly scarlatinal over the whole body; generally, on the limbs or back, the rash assumes a distinctly morbilliform character. The throat in these cases is quite free from any inflammatory appearance.

Acute desquamative dermatitis is another condition under which we may have a well-marked scarlatiniform rash, going on to desquamation, and associated with more or less pyrexia. The following is an interesting example, for the notes of which I am indebted to Dr. Shepherd, of Montreal:

Thomas Smith, aged 16, office boy, born in England, presented himself on the 9th of July, 1893, at the out-patient department for diseases of the skin of the Montreal General Hospital. The following is an abstract of the notes taken at the time:

The lad is anæmic and has never been strong. Three months ago a scarlatiniform eruption appeared all over the body. It was associated with fever and vomiting. The fever lasted about nine days, when desquamation set in, continued for ten days and then the boy got perfectly well. Two weeks previous to the present appearance he had a similar attack, followed by a similar peeling of the skin to that which is now going on. This desquamation resembles very closely that of scarlet fever. There is no redness or inflammatory condition, but the skin is covered with fine white branny scales and is very itchy. On the palms of the hands and soles of the feet there are large blisters, in size varying from that of a five-cent piece to that of a silver dollar. These fill with watery serum, and when this is let out, the piece of skin covering it becomes detached. No scab forms, as in ordinary pemphigus. Numerous marks of previous blisters are visible. Over some of these spots the skin is in a cracked eczematous condition. There is also well-marked eczema of the sides of the fingers. Under a course of arsenic the condition completely passed away and desquamation ceased. The following year, on the 24th of March, the lad returned. Eight days previously he had had a distinct chill; on the two succeeding days he was "out of sorts;" and on the third day he felt sick at the stomach, and afterwards a red, uniform rash appeared and gradually spread until it covered the whole body. He felt hot and feverish. The rash remained out for three days and began to fade the day previous to his presenting himself at the hospital. On examination, the only evidences of the rash at the time were found about the thighs, which were covered with a uniform scarlatinal erythema. Both ears were covered with fine desquamating scales. The tongue was clean, but the papillæ were enlarged. The throat was not reddened and was said not to be sore. His principal complaint was of the itchiness of the skin. The temperature in the axilla was 100° F. A saline mixture was prescribed. The patient returned again in June of the same year with a very similar condition of the skin, and was placed on a course of arsenic, under which recovery took place.

The most important of these scarlatiniform rashes, because most frequently met with, and most liable to be mistaken, are those cases of rubella or rotheln which present a scarlatinal rash. In general the exanthem of rubella more closely resembles measles than scarlet fever; but every now and then, more frequently in some epidemics than in others, cases arise when it is impossible to give an immediate absolute diagnosis. The rash on the first appearance may show no characteristic difference; pyrexia may be present and a varying amount of tonsillar congestion. In such cases the all-important factor for correct diagnosis is time, and the following consideration will influence us:

Even in mild cases of scarlatina we find a more decided disturbance of the nervous system than in cases with a similar amount of pyrexia in rubella. Drowsiness or marked irritability of the nervous centers generally precedes the appearance of the exanthem in the former disease, almost never in the latter. In rubella the rash, especially after the second day, and on the lower extremities shows a distinctly patchy condition, with well-defined and slightly raised margins, or sometimes assumes an almost morbilliform appearance, which is never the case in scarlatina. In scarlatina the pharyngeal congestion is always more or less present, and always bears a fairly definite relation to the amount of rash. In rubella the exanthem may be well-marked, while the congestion of throat may be slight and limited to the tonsils. The post cervical glands are almost always enlarged early in an attack of rubella; if enlarged at all in scarlatina, it is only towards the close of the first week. In scarlet fever, even in mild cases, towards the end of the first week, we have a distinct loss of epithelium on the dorsum of the tongue, giving rise to the well-known term "strawberry tongue." This, of course, is much more manifest in some cases than in others, but I believe always takes place. I have never noticed it in rubella. I cannot, for myself, place the same value on a quick pulse that some writers do. Like other symptoms, it may occasionally deceive us. I have seen cases of undoubted scarlatina where the pulse, though quickened, was only moderately so. The incubation period can only be of value to us where several cases occur successively in the same family.

In all such cases we should insist on absolute isolation, but claim time before we express our diagnosis, and, as teachers, while emphasizing to students the danger incurred in overlooking mild cases of scarlatina, we should also point out not only the unnecessary expense and wrong to parents involved in stamping every case of scarlatinal rash, as the much-dreaded scarlet fever, but also the actual danger to the child affected should it be sent to an infectious hospital. The following is a case in point, the particulars of which were related to me by a friend:

G. H., a lad of about 7 years, when seen was covered with a well-marked scarlatiniform exanthem covering the greater part of the body, which had appeared the day previously. The child did not look ill and complained of nothing. His temperature was 100.5°, the pulse 96 and the tongue somewhat furred. There was no history of any prodromata. The case was declared to be one of scarlet fever and the child sent to an infectious hospital. On the following day the temperature was almost normal, but on the next it rose suddenly to 106° F., and the child died in a comatose state the following morning. Two other children in the same family took ill ten days after the first had been removed to the hospital. There was the same scarlatinal rash, slight pyrexia, rapidly subsiding to normal, desquamation on the second week and rapid recovery.

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ROBERT D. JEWETT, M.D., EDITOR.

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Editorial.

Diphtheria Antitoxin.

There is still lingering in the minds of many a doubt as to the real usefulness of antitoxic serum in the treatment and prevention of diphtheria. It is well, probably, that this is so, unless that doubt is founded upon a prejudice which keeps some suffering child from the chance of relief which the remedy might hold out. It is well that the subject be carefully studied *pro* and *contra*, that defects and dangers may be noted and overcome.

A century ago the world was discussing Jenner's great discovery that would, according to the discoverer's assertion, make small-pox disappear from off the face of the earth, if man would but use it. Some believed but more doubted, and time has shown that Jenner was right. Now another discovery, which will prove to the world no less a blessing than vaccination, if time proves the claims of its discoverers to be true, is attracting the attention of the world. What will be the result? Time only will reveal the true place serum therapy will hold in the treatment of disease, but in our opinion, and we believe the vast majority of the profession are like-minded, that place will be a very important one. The treatment of diphtheria by antitoxin has established itself on so sure a foundation that he who denies its efficacy is, at least, reckless. That the tendency of the times is to rush too enthusiastically into new methods that some theorist has advanced, and that this haste is rather that the pioneer may glorify himself than relieve human ills, we will admit, but how men, in the face of such overwhelming favorable testimony as to the clinical results of this treatment, from observers of recognized scientific ability and honesty, can totally oppose it, we cannot understand. Certainly they are placing themselves in a position from which they must recede.

The most notable opponent of the treatment is Hanseman, who denies even that the Loeffler bacillus is the cause of diphtheria, because it is sometimes found in healthy throats and some cases occur in which the bacillus is not found. The same argument would apply to other germs as the cause of infectious disease, and there are some opinionists who do even assert that the comma bacillus is not the cause of cholera nor the bacillus tuberculosis of consumption. Hanseman's objections have been satisfactorily answered by C. Fraenkel. In this country the most out-and-out opponent of the treatment seems to be Dr. Joseph E. Winters, who expressed his views before the New York Academy of Medicine at its meeting April 4th last. He claimed to base his opinion on "three months of daily clinical observation of the effects of the antitoxin in one hundred and fifty-four cases of diphtheria treated in the Willard Parker Hospital." Note some of his statements: "At the Willard Parker Hospital, in the month of December last, we had eight *consecutive* recoveries after intubation in cases of laryngeal diphtheria without antitoxin." "At the Willard Parker Hospital, in the month of December, 1894, the recoveries from laryngeal diphtheria without antitoxin were about seventy-five per cent. This has never been equalled with the antitoxin treatment with or without intubation." "Any case which, at the time of admission, has given evidence that the disease was progressive in its course, that course has not been stayed or changed in any particular by the antitoxin treatment." As to the untoward effects, he says: "Babies have been brought to that hospital with slight clinical evidence of diphtheria—babies, with the exception of a slight exudate in the throat, and perhaps a slight croupy cough, that were apparently healthy and with rosy color. They remained in good condition for perhaps ten days or two weeks after receiving antitoxin, when one day as you enter the ward you hear a moan, and, approaching the crib, you find the baby lying on its side with its head retracted, its arms and legs flexed, and moaning piteously. These are cases of antitoxin infection. The temperature charts show a record of 105° to 106°. The symptoms may gradually subside, leaving the baby weak and extremely anæmic, or for days the temperature varies between 99° and 107°. . . . *Horse serum dissolves human blood corpuscles and thereby produces new elements of decomposition. The condition of the babies just spoken of was one of antitoxic septicæmia, and brought about by the influence of the antitoxin on the blood.*" "I have failed to see the slightest evidence that it neutralized the toxæmia in a single case. I have never found that it exerted the slightest influence for good in a single clinical manifestation of the disease."

Now note some of the statements of Dr. W. H. Park, in the *Boston Medical and Surgical Journal* of September 12th, 1895. His statements are based on "the effect observed in cases of diphtheria treated with antitoxin at the Willard Parker Hospital during the first five months of 1895. He says, in regard to the cases in December, 1894, "they show a mortality of forty-two per cent. for all cases in December, and not one of all the thirteen cases intubated recovered." The cases for the first five months of 1895 "include all patients received who had both clinical and bacteriological evidences of diphtheria. About five per cent. had, upon admission, only swelling and hyperæmia. A certain number were received in a moribund condition; these are also included. . . . . There were 255 cases admitted; of these 183 recovered, 71 died, making a mortality of 27.8 per cent." During the last four months there have been but eleven cases whose temperature reached 105° and only three 106°. Eight of these fourteen cases had on admission severe laryngeal diphtheria, and were almost immediately intubated, and all but two of the fourteen had pneumonia during their high temperature. One of these two was septic from the beginning, dying on the sixteenth day, and the other was an eleven months' child with tubercular ulceration on arms and legs."

We thus see that were the facts just as Dr. Winters' paper leads one to suppose, there would be good reason for avoiding antitoxin, but we see that his statement of facts was not supported by the records of the hospital, according to Dr. Park, and therefore his deductions can have but little weight.

One of the most complete and convincing papers upon the present status of the antitoxin treatment is by Prof. William Welch, of Johns Hopkins Hospital and published in the *Bulletin* of the Hospital. He says: "Antitoxic serum is a new and strange remedy, but the effects which follow its injection in individual cases are not new and strange. . . . But why should anything new and strange happen after the administration of antitoxin? Cure by antitoxin is cure by nature's own remedial agent. . . . Recovery following treatment by antitoxin is such a natural kind of recovery that, in any given case, the physician may readily have the feeling that the same thing might have happened without the use of the remedy." Dr. Welch has collected 82 reports containing 7,166 cases. In these reports the mortality under the antitoxin treatment is compared with the previous mortality from the same source. Objection is made by some critics that all cases where the Loeffler bacillus is found are included in statistics generally, and that the large number of very mild cases thus included reduces the death-rate, while the same result follows leaving out many severe cases in which the bacillus is not found. In the records of the New York City Board of Health these latter are classed as pseudo-diphtheria, and while a few of them are severe and even prove fatal, Dr. Biggs has shown that the mortality is far below that in true diphtheria, taking all cases where the bacillus is present. Therefore, excluding all those cases where the bacillus is not found, tends to increase the mortality rather than reduce it. Dr. Welch demonstrates this point by citing the report of Roux, Martin and Chaillou, from which 128 cases of pseudo-diphtheria were thrown out. The mortality in these cases was only 8.5 per cent., while in the 300 remaining cases where the bacillus was found the mortality was 26 per cent.

The death-rate of the 7,166 cases treated with antitoxin was 17.3 per cent. Of the 7,166 cases, there were 5,777 from hospital reports, and these show a fatality of 18.7 per cent. In 46 of the 82 reports the previous or simultaneous fatality without antitoxin is stated. In these 42 reports there were 5,406 cases, with 1,008 deaths, a fatality of 18.6 per cent. If the number of deaths in these cases were estimated on the basis of the previous fatality, the number would have been 2,279, a fatality of 42.1 per cent. This shows a reduction under the antitoxin treatment of 55.8 per cent. In conclusion, Dr. Welch says: "The principal conclusion which I would draw from this paper is, that our study of the results of the treatment of over 7,000 cases of diphtheria by antitoxin demonstrates, beyond all reasonable doubt, that anti-diphtheritic serum is a specific curative agent for diphtheria, surpassing in its efficacy all other known methods of treatment for this disease. It is the duty of the physician to use it. . . . The discovery of the healing serum is entirely the result of laboratory work. It is an outcome of the studies of immunity. In no sense was the discovery an accidental one. Every step leading to it can be traced, and every step was taken with a definite purpose and to solve a definite problem."

Reviews and Book Notices.

Lectures on Appendicitis and Notes on Other Subjects. By Robert T. Morris, A.M., M.D., Fellow of the New York Academy of Medicine, American Association of Obstetricians and Gynæcologists, etc., etc. With illustrations by Henry McDonald, M.D. Cloth, octavo, 163 pages. G. P. Putnam's Sons, New York, 1895.

Dr. Morris' writings on the subject of appendicitis are more or less familiar to all who have taken any interest in the development of the subject. His papers contributed to medical journals or associations have been widely reprinted and quoted. We are pleased to see his discussion of the whole subject put into shape for easy reading and reference. His ideas are so well known that it is hardly necessary to discuss them.

The first four chapters, which are devoted to the special subject of appendicitis, are liberally illustrated by photographic reproductions of some of his typical specimens and by anatomical drawings. In Chapter IV., which discusses the Surgical Treatment of Appendicitis, the inch-and-a-half incision is explained and its advantages clearly set forth. He appreciates the fact that in operative procedures each surgeon must be a law unto himself, but it was his object to blaze out one "clear trail through the subject."

Chapter V. is devoted to notes on various subjects of greater or less length. Especially interesting among these are, "An Addition to McGuire's Operation for a Supra-pubic Urethra;" "The Drainage Wick," an excellent device by Dr. Morris, having the advantages of capillary action without the fibres coming into contact with the tissues; "The Reason Why Patients Recover from Tuberculosis of the Peritoneum;" "Skin Grafting from Blisters;" etc.

The book is gotten up in most beautiful style on enameled paper, and the illustrations are perfect.

The Pocket Materia Medica and Therapeutics. A Resume of the Action and Doses of all Officinal and Non Officinal Drugs now in common use. By C. Henri Leonard, A.M., M.D., Professor of the Medical and Surgical Diseases of Women and Clinical Gynæcology in the Detroit College of Medicine. Second edition, revised and enlarged; cloth, large 16-mo., 367 pages; price, post-paid, $1.00. Detroit, 1895. The Illustrated Medical Journal Company Publishers.

The second edition of this popular therapeutic work has had 67 pages added to it, besides typographical errors corrected, etc. A new and complete cross-index has been prepared, which renders the quick finding of a non-familiar drug possible. This is an important feature lacking in many ready-reference books. It is a "down-to-date book," and this with unique arrangement of its description of drugs and compounds secured for the first edition an order by cablegram for 1,000 copies from Bailleire, Tindall & Co., one of the largest medical publishing houses in London—a compliment rarely paid any American book. It has also been a popular book with physicians, pharmacists and students on this side of the water, judging from the early exhaustion of the first edition.

The descriptive arrangement of the drugs is as follows: Alphabetically the drug, with its pronunciation (officinal or non-officinal standing indicated), genitive case-ending, common name, dose and metric dose. Then the English, French and German synonyms. If a plant, the part used, habitat, natural order, botanic description, with alkaloids, if any; if a mineral, its chemical symbol, atomic weight, looks, taste, how found, its peculiarities. Then the action and uses of the drug or compound, its antagonists, its incompatibles, its synergists and then antidotes. Then follow its officinal and non-officinal preparations with their medium and maximum doses. Altogether, it is a handy volume for physician, druggist or student, and will be frequently appealed to if in one's possession. We believe it to be the most complete and exact of any of the books of its class now issued, and its moderate price is to be commended.

Abstracts.

THE INCREASED MORTALITY FROM PNEUMONIA.—Dr. Thomas M. Woodson discusses (*Med. and Surg. Reporter*) the increased mortality from pneumonia, which has become so marked of late years, and while he gives due credit to the lowered vitality brought about by antecedent attacks of la grippe, and the present habits of living as compared with those of the past, as factors in the cause of this increased mortality, he thinks that modern treatment may have more to do with it. Is all done that can be done by the use of remedies to reduce the death-rate? Authors and teachers of the period give no encouragement to the idea of aborting, abbreviating, or even modifying the course of an attack of pneumonia. They teach that it must run its course, while the physician looks on without the power to interfere. Is there any drug which can so modify congestive processes as to prevent intense congestion and subsequent exudate? He thinks we have two such drugs in quinine and veratrum viride. Cases of death from veratrum virde are medical curiosities, so rare are they. Brought to bear at the proper time, the stage of excitement and congestion, and carefully watched, there certainly is far less danger of depression than in allowing the inflammation to proceed to consolidation, when the obstructed pulmonary circulation is sure to result in an over-taxed and engorged heart, with its frequent sad ending—heart failure. The brilliant work of the modern bacteriologist and chemist, with their microscope and test-tube, has diverted the young physician from a knowledge of established remedies of acknowledged merit.

ACCURACY IN COMPOUNDING PRESCRIPTIONS.—Mr. E. A. Schubert, in the *Western Druggist*, gives the following result of a practical test of the efficiency and professional integrity of the druggists in a certian section of Ohio: "I espoused the thought," remarks Mr. Schubert, "that it would be a capital idea to write a prescription of easy composition and analysis, to see how many druggists would fill it correctly. I set to work immediately mailing to each of fifty physicians one of the prescriptions, at the same time asking him to write it as a prescription of his own, send some friend with it to his druggis to have it filled, a copy taken and returned to me with the compounded prescription. Out of the fifty requests sent out, I received thirty-seven answers. The prescription called for a three-ounce preparation, but, placing them side by side, I found twenty-one to be three-ounce preparations, seven were in size four ounces, while the rest ranged in size from five to eight ounces. It was to be an emulsion; nineteen were of that composition, the remainder were far from being true to name. In color, when correctly filled, it would be nearly white; of these twenty-two were true in color, while the remainder ranged from a steel gray to nearly all the known hues. The principal active ingredient was the acetate of morphine; thirteen only contained this, the remainder principally contained the sulphate. *Out of the entire number returned, eleven were found to be filled correctly.* The remainder were base substitutions, either through ignorance or intention. Of the eleven that were correct, nine came from the hands of Ph. G's., the remaining two were compounded by old and reliable druggists in the city. Of the twenty-six not properly filled we found five Ph. G's., the remainder were country druggists having very little experience in this line and located, with but few exceptions, in towns of 6,000 inhabitants and less." Can it be possible that this sort of recklessness and ignorance characterizes the profession in other intelligent communities?

ABSCESS.—Never try fluctuation across a limb, always along it.

Never forget that:

1. Abscesses near a large joint often communicate with the joint.

2. Abscesses near a large artery sometimes communicate with the artery.

3. Abdominal wall abscesses sometimes communicate with the gut or the solid viscera.

Never forget that early openings are imperative in abscesses situated:

1. In the neighborhood of joints.

2. In the abdominal wall.

3. In the neck, under the deep fascia.

4. In the palm of the hand.

5. Beneath periosteum.

6. About the rectum, prostate and urethra.

To wait for abscesses to "point" or to "burst" in these situations is culpable as well as cowardly.

Remember the frequency with which hematomata and traumatic aneurism have been mistaken for abscesses, and incised with untoward results.

Do not open an abscess anywhere near a large artery without first using a stethoscope, and then only by Hilton's method, i. e., scalpel, director and dressing forceps.

Never, under any circumstances, use for exploratory puncture "that surgical abomination, a grooved needle," for it will allow contamination of all the tissues through which it brings the fluids. (Thornton.)

Never plunge in opening abscesses; never squeeze the sac after doing so.

Do not forget that your incision should radiate:

1. In abscesses pointing near the nipple.

2. In abscesses near the anus.

3. In scarifying the chemosis of the cornea.

And that your incision should be longitudinal:

1. In the hand.

2. In the urethra.

3. On the vertex.

Do not forget that incisions for abscesses in neck or face should run parallel with the wrinkles and folds.

Do not be afraid of hurting the lacteal tubes in mammary abscess. More harm is done to the gland by the enlargement of the walls of the abscess than by a free incision.

Never make a palmar incision except in the middle of the lower third and in the axial line of the fingers or at the sides of the palm.

Do not forget, in opening a deep abscess in the lumbar region without the projection of the abscess, to cut down opposite a transverse process, not between them, for fear of wounding a lumbar artery.—*Atlanta Medical and Surg. Jour.*

FIVE YEARS' EXPERIENCE WITH THE COLD BATH TREATMENT IN FEVER.—(Osler, *Med. News.*)—During the first year of hospital service typhoid fever was treated symptomatically. There were admitted during this year 33 cases with 8 deaths, a fatality of 24.2 per cent. During the past five years Brand's system has been carried out with certain minor modifications. There were admitted during these years 356 cases with 26 deaths, a fatality of 7.3 per cent. However, there were only 299 of these who received the baths, and of this number 20 died, a fatality of 6.6 per cent. These figures include all cases of typhoid fever admitted whatever the condition on admission. Various circumstances interfered with the carrying out of the treatment. Some cases were admitted in the second or third week with a falling temperature and the fever constantly below 102.5. Some patients are admitted late in the disease and are too ill to bathe. There were five of these, of whom not one died. The baths were postponed in several instances on account of hemorrhage. In no instance did the pulmonary symptoms seem to contraindicate the baths. There were some cases that were not bathed at first because the diagnosis was doubtful. Two of the fatal cases that died were not recognized clinically as typhoid fever. Lastly, the baths have been changed to the cold sponging on account of hemorrhage, profound weakness, tenderness and swelling of the abdomen, signs of perforation, and in a few cases because of the active protestations of the patient. In carrying out the treatment each patient receives a tub-bath of twenty minutes at 70° F. every third hour, when the rectal temperature is at or above 102.5° F. Frictions are applied in the bath, and a warm drink or stimulant is given afterward. In a large proportion of the cases no other treatment is used. If the pulse is weak, whiskey is given and strychnine. The diet is wholly milk or in part broths and egg albumin. The cold-bath treatment rigidly enforced, by comparison of extensive statistics, seems to save from 6 to 8 in each hundred of typhoid fever patients admitted to the care of the hospital physician. The author concludes: "While I enforce the method for its results, I am not enamored of the practice. I have been criticised rather sharply for saying harsh words about the Brand system. To-day, when I hear a young girl say that she enjoys the baths, I accept the criticism and feel it just; but to-morrow, when I hear a poor fellow (who has been dumped, like Falstaff, 'hissing hot,' into a cold tub), chattering out maledictions on nurses and doctors, I am inclined to resent it and to pray for a method which may be, while equally life-saving, to put it mildly, less disagreeable."

ELECTROTHERAPY AS A MEANS OF DIAGNOSIS IN GYNÆCOLOGY. — Dr. Apostoli, after a long and thorough trial of his method, has come to the following general conclusions:

1. The faradic current of tension (generated by the coil of long and fine wire) applied to the uterine cavity, according to the rules established by Dr. Apostoli in 1883, relieves, for a longer or shorter time, all ovarian pain of nervous or hysterical origin; but remains powerless or nearly so in cases of ovarian pain caused by inflammatory lesion of the peri-uterine tissue or of the appendages.

2. The same faradic current is therefore useful in diagnosis, inasmuch as it helps us to distinguish the nature of so-called ovarian pain, and to determine rapidly the differential diagnosis between hysterical and inflammatory ovarian pain. Where the two kinds of pain exist in the same patient we are helped to understand their nature by the fact that the one is relieved and the other is not.

3. If, then, the curative effect of the faradic current clears up or rectifies a doubtful diagnosis, it protects us at the same time, from undertaking a useless operation.

On the other hand, if the same faradic current proves ineffective, the lesion being inflammatory, we are led to resort to a supplementary galvanic treatment or to a surgical operation sooner or later.

4. The constant galvanic current, applied to the uterine cavity in doses gradually increasing from 50 to 120 milliamperes, according to the rules published by Dr. Apostoli in 1884, and bearing in mind the individual susceptibility and tolerance, will be almost always supported without much pain during the séance, and without febrile reaction afterward, if the parts adjacent to the uterus are free from inflammation.

Simple cystic, peri-uterine tumors, which are neither inflamed nor suppurating (such as ovarian cysts and hydro-salpinx), may also show perfect tolerance of the galvanic current.

The galvanic current is also sometimes perfectly supported by cases in which the uterus is surrounded by old inflammatory products or exudations no longer pathogenic.

5. There are three classes of cases which should be considered as exceptions to the preceding rule, for they bear the galvanic current more or less badly, though they do not necessarily produce much febrile reaction after the séance.

They are:

a. Certain forms of hysteria.

b. Fibro-cystic tumors of the uterus.

c. Enteritis with false membrane.

It is generally easy to diagnose these cases of intolerance.

6. All acute peri-uterine inflammation (of the pelvic cellular tissues, of the peritoneum, and especially of the appendages) will cause the galvanic current to be badly borne when it passes 40 or 50 milliamperes, and will cause intolerable pain and febrile reaction when carried beyond this intensity.

7. The intolerance for the galvanic current is generally proportionate to the extent and gravity of the lesions referred to and increases with the in-

tensity of the current employed—especially when it passes 40 or 50 milliamperes.

8. All inflammation of the appendages which is curable (symptomatically at least) without radical operation, will bear the galvanic current better and better, and there will be a corresponding improvement of the prominent symptoms, such as pain and hemorrhages.

The intolerance noted at the beginning progressively disappears.

9. All grave inflammatory lesions of the appendages, and notably all suppurative processes which are incurable (even symptomatically) by conservative means, show the same intolerance from the beginning to the end of the treatment which was noticed at first, and which is apt to increase instead of diminish if the treatment is continued.

10. Thus, the simple study of the tolerance or intolerance of the intra-uterine galvanic treatment, and especially of the post-operative pain and fever occurring on the evening of, or the day following the treatment, enables us to make the diagnosis. It also, in 4 or 5 séances, given twice weekly, informs us of the condition of the appendages, of their possible inflammation and its degree, and in this way it lessens the number of laparotomies and exploratory incisions.

11. The same study of the so-called galvanic reactions also informs us rapidly (in 5 to 10 séances) of the curability of these inflammatory lesions which the electric current has demonstrated, and in consequence of this it tells us in one case to abstain from operation, while in another it shows an operation to be urgent.

12. En résumé, Gynæcological Electro-Therapeutics, carefully, methodically and patiently applied, instead of being opposed to the marvellous progress of surgery, comes to its aid.

Independently, in fact, of the great therapeutic service which it renders every day, electricity serves as a *touch-stone ;* it assists us in diagnosis, and thus directly serves the interests of surgery, in one case showing an operation to be useless and dangerous, in another that its necessity is urgent.

Thus many of the laparotomies, so-called exploratory incisions and mutilations practiced without due deliberation for the relief of rebellious ovarian pain or for lesions of the appendages of uncertain nature, should be, from this time forth, delayed or formally proscribed until all the resources of *faradic sedation*, on the one hand, and of the *intra-uterine galvanic effect* on the other, have been tried. Experience has abundantly proved these currents to be innocuous, if given with necessary aseptic precautions.

VAGINAL DRAINAGE IN ABDOMINAL SECTION.—(G. H. Mallett, *American Jour. of Obstet.*) The English and American surgeons have been sceptical as to the possibility of keeping out all germs, and have turned their attention to the removal of the pabulum of the germs and trusted to the vitality of the living tissues to resist the microbes when the cavity, free from dead and foreign matter, is kept dry and the vitality of the patient is maintained. They have favored these ends by a short incision and by removing blood, pus, contents of cysts, etc., by irrigation, instead of using sponges or gauze—disregarding the oozing from adhesions so long as the latter would be removed by the drainage tube. The time of operation is shortened.

The method of drainage that we advocate is by means of gauze through the vagina, for the following reasons: As the cul-de-sac is the most dependent part of the abdominal cavity, it has the advantage of natural drainage by gravitation. With the abdomen closed and the vagina cleansed, as it should be before every abdominal operation, there is no danger of sepsis. The possibility of fistulæ and herniæ is reduced to a minimum. The actual statistics of the cases drained by this method are better than those where the abdominal wound is left open. There is less pain and reaction after the operation. Dr. Coe, in his book recently published, calls attention to the value of this method when one is compelled to leave the patient, after operation, in the hands of a general practitioner. The attendant has merely to withdraw the gauze with no danger of infection.

The technique of this procedure is simplicity itself. The operator or an assistant passes two fingers into the thoroughly cleansed vagina. The sharp point of a pair of long scissors is then made to puncture the cul-de-sac between the guiding fingers, and by separating the handles of the scissors the opening may be enlarged as much as is desired. A pair of forceps is then passed through the vagina into the cul-de-sac, and the end of a narrow strip of gauze is caught and brought out through the vagina; the pelvis is then packed with the gauze to the extent that is deemed advisable. The intestines and omentum are allowed to regain their natural relations and the incision is closed. The gauze in the vagina can be easily wthdrawn a few inches on the second day. The vagina can be irrigated with an aseptic fluid as often as may be necessary, or a package of iodoform gauze may be inserted. The gauze may be gradually removed, depending upon the amount of drainage required.

In conclusion, the points that I wish to emphasize are: That the tendency of all operators seems to be toward the limitation of drainage to bad pus cases. The wonderful results of vaginal hysterectomy for pelvic suppuration have shown the value of drainage by the vaginal route, and have gone far to convince men that the patient has a better chance for recovery if the pelvic cavity is completely shut off from the air and all fluid is allowed to escape. By this method the organs are not disturbed nor unduly pressed upon. The intestines are not interfered with and the parts are left in the normal condition. When necessary to leave a case to the general practitioner, he has simply to pull out a little gauze from the vagina every day, and he cannot introduce sepsis.

PYOPNEUMOTHORAX. — (W. C. L. Carr, *Archives of Pediatrics.*) Child, aged 10 months, was admitted November 17th into St. Mary's Free Hospital for Children, with a history of fever and hacking cough for two weeks. Examination showed respiration oppressive and 80 per minute, right side fuller than left apparently, but no bulging in the inter-costal spaces, left chest more movable on respiration, tumor in fifth inter-costal space, extending from axillary line to angle of scapula; anteriorly on right side percussion note tympanitic to lower border of eighth rib; hepatic dulness three inches below free border of ribs. Auscultation reveals absence of normal respiratory sounds on right side, amphoric breathing anteriorly and indistinct bronchial breathing between scapula and spine; friction sounds over base of right lung, increased by pressure on the tumor; impossible to produce succussion and metallic tinkling; exaggerated respiration over left lung. Temperature 101° F., in the rectum, pulse 160, respiration 80. Firm pressure was made over tumor by a gauze compress and rubber plaster, which produced more comfort and less laborious breathing. Examination of sputa revealed streptococci, but no tubercle bacilli or shreds of lung tissue. It is probable that the child had an empyema, which had ruptured and discharged itself through the lung. In March, 1895, the baby was in good health, and, save friction sounds at the base of the right lung, showed no evidence of the disease. The case is of interest, chiefly because succussion and metallic tinkling, which are given in text-books as physical signs of pathognomonic importance, could not be elicited.

Menthol in Diphtheria. — Kastorsky reports 37 cases of diphtheria treated and cured by painting with a 10 p. c. alcoholic solution of menthol; marked improvement in the general condition was invariably noticed from the beginning of the treatment. The paintings, by means of a piece of cotton-wool, were usually carried out three times daily, and in some cases a single free application was followed by complete disappearance of false membranes within two days. The same simple method was invariably practiced by the author in numerous cases of anginas of various forms, and by Tritovsky in a group of cases of scarlatinal diphtheria. The paintings are said to be painless and quite harmless.—*The Lancet* (London.)

Obituary.

Louis Pasteur. — Professor Louis Pasteur died at his home, near St. Cloud, on the 28th of September.

Profesor Pasteur was the foremost chemist and biologist of his day, and while he has ceased from his earthly labors, his name will live on for generation after generation, and his fame will be the brighter in the centuries to come. The discovery of the causes of infectious diseases and the wonderful possibilities of modern aseptic surgery are largely based upon his work. One after another he took up various unworked problems, such as fermentation, the manufacture and maladies of wines, the diseases of silk-worms, etc., all of which bore such important relation to the industries and prosperity of his country. These investigations suggested the germ theory of infectious diseases.

Basing his ideas upon the results of Pasteur's investigations, the great Lister introduced the use of antiseptics in surgery. Though by no means the most important of Pasteur's works, that which has made him most widely known to the people of the world was his investigations into the causes of rabies, and his method of treatment by inoculation.

Louis Pasteur was born December 27th, 1822, at Dole. His father was a soldier and determined that his boy should have an education. He was admitted, at the age of 21, to the Ecole Normale in Paris, where he was graduated in 1846. He was nearly seventy-three years of age at the time of his death.

OFFICIAL LIST OF CHANGES IN THE PUBLIC SERVICE.

THE NAVY.

Three weeks ending October 12th, 1895.

September 21.—Surgeon D. Dickinson, detached from the "Minneapolis" and ordered to examination for promotion.

Surgeon D. M. Bertolette, detached from the "Atlanta" to duty on the "Minneapolis."

October 3, 1895.—Medical Director E. S. Bogert, detached from duty in charge of naval hospital at New York, November 1, and ordered in attendance on officers of the Navy in that city.

Medical Inspector T. N. Penrose ordered to duty November 1st in charge of the naval hospital at New York in addition to his present duty.

Surgeon R. C. Person's recent orders are so far modified that when detached from the "Minnesota" he is ordered to special duty in connection with the improvements of the naval hospital at New York.

Surgeon L. G. Heneberger is ordered to duty in attendance on naval officers in New York.

MARINE HOSPITAL SERVICE.

For the fifteen days ending September 30, 1895.

Fessenden, *C. S. D.*, Surgeon, is granted leave of absence for thirty days, September 24, 1895.

Bailhache, *P. H.*, Surgeon, detailed to represent service at meeting American Public Health Association, September 24, 1895.

Gassaway, *J. M.*, Surgeon, granted leave of absence for one day, September 21, 1895, and for fifteen days, September 23, 1895.

Carter, *H. R.*, Surgeon, granted leave of absence for one day, September 24, 1895.

Brooks, *S. D.*, P. A. Surgeon, directed to proceed from Chicago, Ill., to St. Louis, Mo., for temporary duty, September 16, 1895.

Williams, *L. L.*, P. A. Surgeon, is relieved from temporary duty at South Atlantic Quarantine and directed to rejoin Station at Charleston, S. C., September 19, 1895, granted leave of absence for twelve days, September 25, 1895.

Kinyoun, *J. J.*, P. A. Surgeon, detailed to represent service at meeting American Public Health Association, September 24, 1895.

Stoner, *J. B.*, P. A. Surgeon, is granted leave of absence for thirty days, September 20, 1825.

Rosenan, *M. J.*, P. A. Surgeon, to proceed from Eagle Pass, Texas, to San Francisco Quarantine Station, for temporary duty, September 16, 1895.

Cofer, *L. E.*, Assistant Surgeon, granted leave of absence for thirty days, September 23, 1895.

Nydegger, *J. A.*, Assistant Surgeon, to proceed from Savannah, Ga., to Mobile, Ala., for temporary duty, September 16, 1895.

Oakley, *J. H.*, Assistant Surgeon, granted leave of absence for 30 days, September 30, 1895.

Miscellaneous Items.

Under this head space will be given (free of cost) to those paid-up subscribers who desire to change their location, or to dispose of practice or property. One insertion will be allowed, but inquiries must not be ordered addressed to this office.

Any news connected with professional men and matters in North and South Carolina will be appreciated by the Editor.

Typhoid fever is reported to be epidemic at Washington, D. C., where upwards of 600 cases have occurred.

The Austrian steamship Boskenna Bay, from Habana to Savannah, Ga., has arrived at the South Atlantic Quarantine Station with the master convalescent from, and one sailor ill with, yellow fever.

In an Iowa town quite a number of partakers of a wedding feast have been poisoned. Five deaths have been reported. The feast seems to have been postponed several days for some reason, and the meats being kept, became tainted, with the above disastrous results.

The Sanitarian, in quoting statistics from the *Bulletin* of the North Carolina Board of Health, places Dr. H. T. Bahnson as President, not having discovered that Dr. George Gillett Thomas' name has been appearing as President for about a year.

The Board of Medical Examiners of Pennsylvania do not have much leisure time at their meetings. At the last meeting there were 240 applicants. As the fee is $25 for each, this would make the receipts for this meeting $6,000. The *Medical News* thinks as this must greatly exceed the expenses, the fees should be reduced. It also objects to the applicants having to wait two months before receiving their licenses.

California Wines.—Dr. Bennett F. Davenport, after an analyses of the California wines represented at the Columbian Exposition, compares them with European wines, and concludes that the California dry wines were fully equal to the European wines, and the red wines were in every respect superior to the young French clarets. The sweet wines are to be unconditionally preferred to those of Europe containing the same amount of alcohol and extract, as not being plastered.

Reading Notices.

ACUTE CYSTITIS — Resulting from gonorrhœa and showing symptoms of distress and pain over pubes, frequent and urgent inclination to micturate, urine cloudy and depositing slight amount of mucus on standing.

CHRONIC CYSTITIS—Resulting from enlarged prostate, retained or altered urine, or from gout or nervous derangement—mucus or muco-pus rendering the urine more or less cloudy or opaque.

TREATMENT.—In addition to the mechanical treatment, usually essential in the management of disorders of this class, the administration of Lambert's LITHIATED HYDRANGEA is often of the greatest service. A practitioner of wide experience says: "I have used Lambert's LITHIATED HYDRANGEA on various persons affected with divers and painful manifestations of chronic rheumatism, gout, lithiasis-urtica, nephritic calculus and functional disturbances of the renal system, with excellent results, and I consider it a valuable remedy for normalizing the renal function, for promoting the active elimination of uric acid and to calm the congestive conditions of the kidneys and of the urinary mucous membrane."

LACTOPHENIN.—I have tried this new remedy as an analgesic in over 800 cases. In over 100 cases of pneumonia I have had occasion to notice its effects, and the fact that it is a safe and speedy antipyretic. I cannot say too much of its soothing effects on the nervous system and of its general superiority above all other synthetic analgesics.

Recently I had occasion to prescribe it for a case of occipital neuralgia after all other remedies had failed, and the relief that was afforded was both speedy and permanent. I sometimes find it advantageous to combine it with caffeine.

One notable fact about Lactophenin is, that in no instance has it ever appeared to induce that blue, livid condition of the lips and face that so frequently succeeds upon the administration of acetanilid, antipyrin, phenacetin, etc.

In inflammatory rheumatism and in la grippe, in conjunction with quinine and salicylate of soda, it is my sheet-anchor; in the former malady it is advantageously alternated with syrup of trifolium compound.—Dr. J. C. Dwyer, Valentine, Neb., in *The Med. Age*, April, 1895.

A PHARMACEUTICAL TRIUMPH.— There is probably no laxative or cathartic in the materia medica which is more widely known and more generally used, especially as a home remedy, than castor oil.

Its only objection has been its taste. Now however, even this has been removed and we have "A Pleasant Castor Oil."

Laxol is pure castor oil sweetened with benzoic sulphinide and flavored with oil of peppermint.

By referring to our advertising pages, the readers of this journal will learn how they can procure samples and literature without expense.

Laxol is used throughout many of the best hospitals in the East, where it has been known for some time.

I am very truly yours
R. L. Payne, M.D.

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Original Communications.

ROBERT LEE PAYNE, M.D.

BY C. A. JULIAN, M.D., Thomasville, N. C.

The death of Dr. R. L. Payne removes a personage familiar to our citizens and conspicuous in the affairs of the North Carolina Medical Society. Robert Lee Payne was born at Lexington. Davidson county, in North Carolina, December 29th, 1834, and was the son of Dr. C. L. Payne, a prominent and influential physician in that place and a grandson of R. L. Payne, of Goochland county, Va. His father and mother were Virginians by birth; the ancestry on the paternal side were English and on the maternal Scotch. He began his literary education at the old Caldwell Institute, Hillsboro, N. C., and continued to prosecute his studies at Davidson College and University of North Carolina. Having thoroughly qualified himself to commence the study of medicine, he was sent to the Jefferson Medical College, Philadelphia, from which Institution he graduated in 1857. He immediately entered his father's office in Lexington, and remained in copartnership with him until his death. After the death of his father he formed a copartnership with his brother, Dr. C. M. Payne (now Rev. C. M. Payne, of Washington, N. C.), then with his son, Dr. R. L. Payne, Jr. Dr. Payne joined the North Carolina Medical Society in 1859, and he helped to lay the deep foundation upon which was reared our grand superstructure.

His attainments were fully recognized by his fellows, and, as an evidence of their high regard, he was elected Vice-President of the North Carolina Medical Society in 1870, Annual Orator in 1871, and in 1872 he was elected for six years one of the Board of Medical Examiners, a position for which his character and experience particularly fitted him. Conscious of the grave responsibility he assumed in this capacity, he made his examinations most thorough, but tempered them with such kindness and sympathy as to remove much of that embarrassment and dread which most young physicians experience when applying for license. In 1878 the Society conferred upon him their highest honor by electing him as their President. In this capacity he exhibited his strong mind and intellect. Dr. Payne was elected honorary member of the Abingdon Academy of Medicine in 1887. He was elected a member of the North Carolina Board of Health in 1879, and served with distinction for a term of six years. He was again unanimously elected to succeed himself, but declined the proffered honor. He was corresponding member of the Gynecological Society of Boston, of the Meigs and Mason Academy of Medicine, and was examiner of the Confederate Board and Home Guard Board during the late war. For nineteen years he was the attending physician to the Poor House of Davidson county. His natural kindness of heart and his peculiar way well qualified him for this work. Few have possessed more delicate sensibilities, a warmer heart or kinder spmpathies. Especially did his tenderness manifest itself for those unfortunate beings, the poor—none of them were overlooked, none had just cause to feel themselves neglected. There was no selfishness in his ambition; one of his strongest characteristics was his tenderness for everything weak; this was manifested especially toward the young physicians of his acquaintance.

Dr. Payne had other qualifications aside from his chosen profession. His enterprise and activity among his townsmen won for him great admiration and a high regard for his opinion in municipal affairs, and in consequence as often as he would accept, he was elected magistrate and commissioner of his town.

Dr. Payne was a man of scholastic and literary attainments. He applied himself rigidly to every task, and the works from his pen indicate an erudition much more extensive than the ordinary. In 1887, Davidson College, recognizing his ability and scientific attainments, conferred upon him the honorary degree of Master of Arts. He contributed liberally to the transactions of the North Carolina Medical Society and wrote many articles for the NORTH CAROLINA MEDICAL JOURNAL, *Medical and Surgical Reporter*, *Virginia Medical Monthly*, *Louisville Journal* and most of the leading journals of the day, and in all his writings he exhibited strength of thought, sound commonsense and felicity of expression. His article on Diphtheria deserves especial mention, being pronounced by some of our most successful practitioners as worth more to the physician seeking to cure his patients than all other books and papers combined on the subject. This article, with a paper entitled "The Health of Our School-Girls," were reprinted and largely distributed by the Board of Health in the State.

Dr. Payne, as a practitioner, was eminently successful, faithful, skilled and much beloved, and enjoyed a very extensive practice. His manner in the sick-room was exceedingly nice, for the time being he seemed oblivious to everything else, concentrating the whole of his powerful nature on the one object of his visit—the relieving of his patient.

He devoted his attention largely to surgery and diseases of women, and the profession attested his attainments by sending for him in council in and out of the State. He was quick to respond to a brother physician in distress. He never let an opportunity escape to harmonize the profession about him or to elevate its tone. The Davidson County Medical Society, of which he was President at the time of his death, owes prrhaps more to him than to any other man.

In May, 1856, Dr. Payne married Miss Winifred T. Wilson, daughter of John Wilson, Esq., formerly of Danville, Va. She is a woman of excellent traits, with a generous, warm and loving heart—a fit consort for her noble husband. She, whom none thought could endure the wear of years as long as he, remains to mourn the loss of an affectionate husband. This union was blessed with the birth of five children, four of whom survive him—one son, Dr. R. L. Payne, Jr., on whom the mantle of the father has fallen, and three daughters, Mrs. M. P. Fowle, of Washington, N. C.; Mrs. Fannie T. Sparrow, of Washington, and Mrs. Bessie W. Beckwith, of Plymouth, Pa.

His was a model home, cared for by a devoted husband, a wise and loving father, generous almost to a fault, hospitable to all.

Dr. Payne was a truly honest, upright Christian physician, and remained a faithful and consistent member of the Presbyterian Church until his death. By precept and example he strove to do his part for the honor and glory of his Master. His Christian character, both in life and death, was fully exemplified. From 1861 to the day of his death, he was a Ruling Elder in his Church. He felt the assurance of his reward. His last words were, "Lord Jesus, receive my spirit."

About noonday, on the 25th of February, 1895, word came suddenly that Dr. Payne had been assassinated on the streets of his native town. The news created the greatest sensation and consternation. The people were overwhelmed by so unexpected an event. The profoundest grief was everywhere evinced. Immediately upon hearing of his death, telegrams poured in to the bereaved family from friends and members of the medical profession, expressing their great sympathy and indignation on account of his untimely death. Torn ruthlessly, while yet in his full strength and manly vigor, from his work he loved so well, scarcely before the furrows of age had plowed his noble brow—torn from an affectionate wife and loving family—still his death was calm and resigned. The funeral solemnities were conducted on the 27th of February last. Hundreds of people attended and followed him to his last resting-place. His remains were borne from his grief-stricken home to the church, where appropriate ceremonies were performed by ministers who paid tender and affectionate tributes to his memory. The entire church was hung in mourning. After the remains were viewed by the sad assemblage, the body was placed in the hearse, drawn by the horses that had conveyed him so many weary miles in his daily practice, followed by the family; after them came all the physicians of the county and from various parts of the State, and the rear was formed by the people of the town and community, who expressed their grief by their silent tears.

That such a life should be stricken down at its zenith seems pitiable, but it is not, when we recall its fullness of labor, the noble record it has left—when we remember how consecrated it was to its Creator, it becomes a marvelous heritage, full of choicest memories which shall live forever.

OPERATION FOR DOUBLE PYOSALPINX.

By William H. Wathen, A.M., M.D., Louisville, Ky., Professor of Abdominal Surgery and Gynæcology in the Kentucky School of Medicine, etc.

This afternoon (March 26th, 1895), assisted by Dr. Louis Frank, I removed these pus tubes before the class at the Kentucky School of Medicine Hospital. I do not know the history of the case, as I only saw her once before the operation, and in a hurried examination concurred in the diagnosis made by Dr. Frank. The uterus was firmly fixed in the pelvis, and upon one side there was a distinct enlargement; on the opposite side there was an enlargement that was not apparently quite so extensive. The patient was in good condition for operation, and left the table with a pulse of 80 and normal in every way. I have not seen her since, but have been informed that she is still in the same condition.

The adhesions were found to be very tough and extensive; fortunately, however, there were no adhesions of any part of the ileum or of the sigmoid flexure of the colon, though the tumor was wedged deep into the cul-de-sac behind the broad ligament and in direct relation with the rectum. The tumors, one upon each side, were finally enucleated, tying off a large pedicle, without any loss of blood and without soiling the peritoneum with pus, and ruptured after we had gotten it out of the cavity, the pus being caught on gauze sponges. After these tubes were removed, at the bottom of the pouch of Douglas and a little to the right, was an induration nearly as large as a silver dollar, extending back toward the sacrum, apparently of a very friable nature, and in the centre of it a little depression, about $\frac{1}{4}$ of an inch in diameter. It apparently was too far to the right to enter into the rectum, but we do not always know exactly where the rectum lies in such cases, and, thinking possibly there might be a small opening into the bowel, I had one of the assistants introduce his finger into the rectum. He found no opening. However, fearing there might be, I introduced a Mikulicz gauze tampon, Spreading it out in such a way as to protect the peritoneum and the intestines from any leakage that might occur in the event of there being an opening. The nurse was directed to insert a rectal tube, so that gas would not accumulate in the lower bowel, and not to use an enema for fear the water might enter the peritoneal cavity and cause death. Even if there is an opening, this woman ought to make a good recovery. A sinus may then remain in the lower part of the wound for some time. The gauze will be kept in a few days.

At the last meeting of this Society the question was discussed briefly as to the removal of pus-tubes, together with the uterus, through the vagina, and

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*Reported to the Louisville (Ky.) Clinical Society.

I then expressed my belief that we were often unable to diagnosticate a condition favorable to this operation until the abdomen had been opened and we had examined the conditions present; giving at that time an illustrative case that I had operated upon a week before, where there were extensive intestinal adhesions, which would have prohibitted any complete operation through the vagina. In the case operated upon to-day, had I known the exact condition, I should have operated through the vagina, removing the uterus and tubes. By this method, even had the rectum become injured, there would have been no reason to expect any trouble and the woman would unquestionably have made a speedy recovery. Where the ovaries and tubes are removed for pyosalpinx, the uterus is usually diseased, because pus-tubes are generally caused by extension of disease from the endometrium. Now, that being true, and the fact that the woman can never bear children, leaves the uterus a useless organ and probably a very troublesome one, and if the operation can be done per vaginam, it is no more dangerous to remove the uterus, tubes and ovaries than it is to remove the tubes and ovaries from above, if you meet with no complications in that operation. I have recently read a very exhaustive paper upon the subject of vaginal hysterectomy for pus-tubes and for uterine myomata, published in the March issue of the *American Journal of Obstetrics*, giving statistics of some of the best French operators; the mortality in pus-cases being less than 5 per cent, and for uterine myomata one and seven-tenths per cent. If you will take the pus cases and exclude the operations of two surgeons, we find the mortality about 3 per cent., which is certainly a very excellent showing. These cases were reported to have been entirely relieved. We know that in celiotomy, where we remove the tubes and ovaries, where extensive adhesions exist, the women are not all relieved and many of them are badly crippled for a long while, some always. We find these women with obstruction of the bowels; with adhesions from pus sinuses lasting for years; with ventral herniæ—and even without these conditions we see them still in a state of invalidism. I could refer to a number of cases where the patients have not been very much improved as regards their symptoms, and I believe these patients would be cured were we to remove the uterus.

I intend to study this question very carefully and to operate more per vaginam than I have been doing, though, as previously stated, I cannot see how we can tell where the uterus is immovably fixed in the pelvis, whether extensive intestinal adhesions have taken place, and serious injury might then be done the intestines if an operation were performed through the lower channel.

MULTIPLE EPULIS OF THE LOWER JAW.

By William L. Rodman, A.M., M.D., Professor of Surgery and Clinical Surgery, Kentucky School of Medicine; Surgeon to Kentucky School of Medicine Hospital, etc., Louisville, Ky.

About the 5th of January, 1895, a young man, aged 26 years, was brought to me from Winchester, Ky., with what seemed to be an ordinary epulis growing from the lower jaw. He stated that the growth had been painless, and there were no enlarged glands in the submaxillary region. Upon examination of the growth, it seemed to spring from the periosteum. I certainly thought it did, but when a more thorough examination and dissection was made under ether, I found the tumor growing from the interior of the bone. To my surprise I found the outer wall of the lower jaw practically gone—very thin in some places and entirely absent in others, and, instead of finding a growth from the periosteum, I saw something which, in my experience, is rather unique, although such cases have been reported: I found four small growths, each distinctly pedunculated, growing from a cavity within the lower jaw. When these were removed, a cavity was left in the bone large enough to easily admit a good-sized walnut. Specimens have been turned over to the microscopist for examination, but his report has not yet been received. I think the growth was benign on account of the appearance of the tumors, further on account of their chronicity, having lasted six years, and because the general health of the patient was excellent. I was compelled to remove quite a large portion of the lower jaw in order to insure complete removal.

The patient made an uneventful recovery from the operation and has returned to his home.

I was led to do a rather more thorough operation in this case than I would have done if the statistics on this subject did not show that 80 per cent. of all tumors of the lower jaw are malignant, rather a larger per cent. than in tumors of the upper jaw, the latter being about 76 per cent. I read a paper on this subject three years ago before the Kentucky State Medical Soeiety, in which I laid stress upon the point that 80 per cent. of all tumors of the lower jaw were malignant aad 20 per cent. were benign. In the case I have reported I believe the growth to be benign, and I do not expect repullulation.

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*Reported to the Louisville (Ky.) Surgical Society.

Selected Papers.

CARDIAC STIMULANTS.

By Herman F. Vickery, M.D., Boston, Mass., Instructor in Clinical Medicine, Harvard University, etc.

The condition of the heart is constantly watched by the medical man. From time immemorial all physicians have sought in the pulse as exemplifying the heart of their patients important aid with regard to diagnosis and weighty suggestions as to treatment. To-day no practitioner is too wise and none too simple to regard it. Neither the gravest consultation nor the most hurried and perfunctory visit is ended before skilful fingers, watched with a mixture of awe and approved by the family, have dwelt upon the radial artery. In all diseases at all stages the behavior of the heart is considered both as an index of the bodily state and a guide for the management of the case.

Unfortunately, this singular unanimity of the profession scarcely extends to the interpretation of the silent message which the heart vouchsafes, and still less to the mode of treatment appropriate to the occasion.

It is the object of the present paper to lay down some general rules as to the choice of cardiac remedies.

As has already been intimated, such a subject touches upon or overlaps all therapeutic measures in all conditions, so that our present consideration will unavoidably be very limited in its scope and incomplete in its details. Yet it is hoped that some practical benefit may be obtained.

In a general way, the disorders of the heart may be divided into those in which it shares in a general weakness of the system, and those in which the original trouble is circulatory, using the word in its broadest sense.

The term general weakness is meant to include nervous debility. It is an interesting fact that the great majority of patients who come voluntarily to a physician because they believe the heart to be diseased are happily mistaken, and are really either dyspeptics, hypochondriacs, sufferers from intercostal neuralgia or addicted to some excess which has occasioned palpitation. The hypochondriacs are, many of them, medical students, some of whom come in anxiety each year to their instructors for examination. I can recall only one of all such whom I have happened to auscult who actually had an organic lesion. The cases of intercostal neuralgia are apt to be anemic and to have tender spots along the course of an intercostal nerve and the heart is found to be normal. The victims of excess (in tea, coffee, tobacco or venery) are numerous. Their general appearance betrays them; and their heart-sounds have a hurried, quick, sharp, and as it were impatient character at the apex, unassociated with enlargement or persistent murmur. There is little muscular element in the first sound. There may or may not be a slight basic systolic murmur, or at the apex a systolic whiff, once or twice during each respiratory cycle. The nervousness of the apex sounds is quite recognizable. The auscultatory signs are valuable in these functional cases, because the patient may not voluntarily confess his wrong-doing, and yet it is useless for him to swallow drugs without reforming his habits. It is better that for a time the special indulgence should be wholly stopped, both because total abstinence is more likely to be attained than is temperance, and because even a small amount of tobacco, for instance, will keep the already nicotized heart in its diseased state.

Alcoholic excess often affects the heart in the way just described, but the other bodily effects are usually too evident for one to need to auscult the heart in order to recognize the nature of the case, and besides arterial and myocardial degeneration may be present, so that the prognosis and treatment are not those of functional disturbance.

In the purely functional cases, bromide and a tonic usually bring immediate subjective improvement, and make it easier for the patient to abstain from the exciting cause. If there be anemia, iron is useful; otherwise, I am apt to prescribe compound tincture of cinchona. Nux vomica and strychnine are usually regarded as physiologically incompatible with the bromides, but in this class of cases 10 or 15 grains of bromide of sodium and 5 or 10 minims of tincture of nux vomica seem to me an efficient combination. An analogous experience is the favorable effect upon some cases of enuresis when the belladonna, which has been used in vain, is combined with nux vomica and the enuresis ceases. Clinical facts are sometimes like Wilkie Collins's heroine, "superior to logic."

Tincture of strophanthus in a dose rarely exceeding 5 minims, three times a day, has a good effect upon nervous palpitation.

Cases of general and nervous debility sometimes have excessive cardiac weakness out of proportion to the other symptoms. The heart impresses one as thin and flabby. It may be somewhat dilated and there may be innocent murmurs. The condition is not devoid of danger. There may be sudden collapse, with pulmonary congestion and death. At the same time the mind has considerable influence upon the disturbance, so that assurances that there is no valvular disease and that with returning bodily vigor the heart will become strong, contribute to the cure. About two years ago, a gentleman who had returned from a scientific expedition to Mexico with neurasthenia, and whose condition was causing his family much anxiety, allowed me to show him to a class of medical students as an unusually fine illustration of multiple inorganic murmurs. He recovered rather rapidly after a sea-voyage, and is now well and actively engaged in his profession of civil engineer. For this neurasthenic state there is no specific remedy.

Economy of nervous energy and a cautious tonic regimen, with massage, graduated exercise, naps, lunches and such drugs as cod-liver oil, iron, arsenic and strychnine avail more than the ordinary cardiac tonics.

The specific fevers afford the greatest opportunity for careful observation, nice discrimination and good judgment in relation to the heart; of any bodily disorders other than circulatory. Some render the matter attractively simple by saying that fever contraindicates the use of digitalis. Others never allow any patient to get very near death before he swallows a certain amount of this panacea. Some of us believe the better way lies between these two extremes, but we are not above confessing that individual cases puzzle us.

It may be well to dwell somewhat upon the properties of digitalis itself, to learn what are the capabilities of the tool we desire to use. Here we find pretty general agreement that digitalis is a nervous stimulant, acting both on the heart itself and on the vagus nerve, and not directly supplying any energy, but merely developing and regulating that which the heart already possesses. It is therefore plain that the drug, if it leads to the display of more cardiac vigor, inasmuch as it does not contribute to the general store, hastens the time when all energy will be exhausted and death ensue. We have an illustration of this fact in the result of the stimulation of the sympathetic nerve, which makes the heart beat stronger and more rapidly, but also leads to earlier exhaustion than otherwise occurs, while a stimulation of the inhibitory fibres of the vagus in such a way as to slow and weaken the heart, actually enables that organ to store up energy.

Digitalis does more good when the heart is rapid, feeble, dilated, irregular in rhythm, and especially when it is irregular in force. If such conditions develop in the course of any disease, we may expect the drug to bring some improvement. What little force there is will be more efficiently employed and a crisis may thus be tided over, and a complete recovery ensue. In long-continued fevers, therefore, the longer such imperative indications for its employment are deferred, and the shorter time the drug is given, the more good it is likely to do. To prescribe it early in a long illness and where perhaps the only abnormalities in the heart are moderate weakness and a rapidity not disproportionately high as compared with the bodily temperature, will in most cases lead to nausea, malnutrition and early exhaustion, rather than to any good. In this connection might be called to mind the well-known difference in the average pulse-rate of pneumonia and of typhoid fever. In uncomplicated typhoid the heart-beats are lower relatively to the fever than in most diseases, so that if the pulse remains permanently at 120 it is of evil omen, while a rate of 140 in pneumonia is perfectly compatible with a favorable prognosis.

The books mention that digitalis does especial good in the exacerbations of chronic bronchitis beyond what it usually accomplishes in general diseases, It has seemed to me that the explanation of this lies in the strain long-continued bronchitis and consequent emphysema exert upon the right ventricle, so that many such patients are heart-cripples, and receive the benefit from digitalis that dilated and enfeebled hearts usually get.

The habitual use of digitalis and other nervine cardiac stimulants in febrile diseases should in my opinion be deprecated. Many favorable cases can be guided to a successful issue without a single dose of the sort. The longer the exhibition of such drugs can be delayed, the less harm and the more good are they likely to do; yet, it is not impossible, although in my own limited experience it is rare, for them to save life, for example, in the enfeebled state sometimes seen at the crisis of pneumonia, the subcutaneous injection of 15 or 25 minims of tincture or digitalis may be of decided advantage.

In general systemic diseases, nux vomica or strychnine, alcohol and coffee commend themselves as more often useful and less often harmful than is digitalis. A temporary stimulation in collapse may be got from a hypodermic of atropine, $\frac{1}{60}$ of a grain, or of cocaine, $\frac{1}{2}$ a grain.

In the acute diseases of the heart cardiac sedatives, such as aconite, are sometimes preferable to stimulants. Every effort should be made to lessen the demands upon the affected but indispensable organ, by enforcing physical and mental rest, and by giving only easily digested nourishment in moderate amounts. If the circulation is being passably maintained, we should let well enough alone. The additional strain consequent upon the stimulation of digitalis and the like, may magnify the inevitable damage done to the valves, aggravate the inflammation of the roughened pericardium, or exhaust the already impaired vitality of the muscular walls.

In chronic valvular disease our first duty is to see that the demands made upon the enfeebled heart are not too great, or at least no greater than is absolutely necessary. If we can lessen the expenses of the economy so that they shall not exceed its diminished income, the heart may long continue to do a satisfactory business at the old stand. If, while it is thus carrying on the circulation, some one gives digitalis, not because it is needed, but because there is a murmur, the heart may be prematurely exhausted. If, however, compensation has been ruptured, then digitalis may be of great benefit, tending to contract the dilated ventricles and to strengthen and regulate the heart-beats.

All agree that mitral disease in its later stages is helped by digitalis; but, in regard to aortic regurgitation, many have an apprehension that digitalis may not be free from harm, because, the disastole being lengthened, more chance will exist for blood to regurgitate into an already over-burdened left ventricle. In reply to this objection, we may say that digitalis tends to contract the left ventricle if dilated and also to invigorate it and to render its contractions more efficient—advantages which more than counterbalance the lengthening of the diastole. One explanation why results are more unsatisfactory in cases of aortic regurgitation is, that when once the heart begins to fail in this disease, life is near its termination and no drug, not even digitalis, can long defer death; whereas in mitral disease existence for years after the first symptoms of ruptured compensation is the rule rather than the exception.

An unfortunate characteristic of digitalis is, that it contracts the arterioles and raises the intra-arterial tension, so that it is worse than folly to give it where the pulse is already of high tension and the aortic second sound loud and booming.

When there are symptoms of cardiac failure, when the apex cannot be located, the heart-sounds are feeble, though without a murmur, and the radial artery is calcified, we know that the degenerated myocardium will not long respond to any stimulus. The rational line of treatment lies in the direction of lessening the heart's burdens, both by general measures and by the specific employment of nitro-glycerine to diminish arterial resistance; and we may also prescribe potassic iodide in the hope that its absorbent powers may open up once more the calcified coronary arteries and permit the better nourishment of the heart-muscle. Iron and arsenic may also contribute to nutrition. Strychnine and strophanthus often prove to be good stimulants. Alcohol is nothing but a palliative, and in this or any chronic cardiac disease is open to the grave suspicion of promoting degenerative processes. Against the exposition of digitalis is its unfortunate property, just mentioned, of raising the intra-arterial tension. Given in combination with nitro-glycerine, we may hope to get the beneficial effects of both drugs. Abstract considerations aside, we do meet with cases of chronic myocarditis where nothing else gives the comfort which digitalis affords. It seems to search out and utilize every mite of energy the expiring organ still possesses. The subcutaneous employment of morphine is also sometimes valuable in the terminal stages of this and other forms of heart disease, not only giving relief, but reprieving the patient from impending death.

Sparteine, adonidin, cactus grandiflora and convallaria majalis may in certain cases be useful. They rank far below the remedies already mentioned. With regard to the choice of a preparation of digitalis, I believe that the tincture is as efficient as the infusion, and that the apparent superiority of the infusion may very likely lie in the fact (pointed out recently by H. C. Wood) that much stronger doses of the latter are given than of the former. In the present U. S. Pharmacopeia the infusion is made one-tenth the strength of the tincture, while its dose is said in the National Dispensatory to be not ten, but twenty-six times larger. If we determine to try the drug in a given case, we should be prepared gradually to push the dose, if necessary, till either benefit or toxic symptoms are produced.—*Boston Medical and Surgical Journal.*

THE DANGERS OF CHLOROFORM ANESTHESIA—HOW TO AVOID AND OVERCOME THEM.

By Frank C. Wilson, M.D.

The frequent occurrence of death during the administration of anesthetics, forcibly impresses upon us the dangers incurred and the importance of a careful review of the subject. A community is shocked by the announcement of the sudden death of one about to undergo some trivial surgical operation. Ineffectual efforts at resuscitation having been made, the coronor is called, an investigation held and a verdict returned of unavoidable death during the administration of an anesthetic.

If happily the efforts to resuscitate have been successful, the patient is brought back to life from death's door and the intense strain lifted from the lives of the doctors concerned, and possibly the patient never realizes the danger from which he has so narrowly escaped.

Dangers may arise:

1. From impurity in the anesthetic used.
2. From administering it to improper subjects or to those not properly prepared.
3. From administering it in an improper manner.
4. If an acident occur the danger will be vastly increased by a failure to detect the earliest indications and to promptly institute measures of resuscitation.
5. Danger is increased in proportion to the prolongation of anesthesia.

As by far the greater number of deaths occur from the administration of chloroform, I will direct the most of my attention to a consideration of the dangers incident to its use. The selection of the anesthetic to be used, however, should be made with the greatest care, choosing the one best suited to the individual case. If there be serious disease of the bronchial tubes, or of the kidneys, then ether should *not* be used. If there is a condition of extreme. prostration from any cause, then ether should be preferred to chloroform.

The danger from impurity of the anesthetic used may be minimized by using an article carefully tested and vouched for by a reliable maker, or, better still, by using only such as you have yourself carefully tested.

In chloroform there may be present acid, usually hydrochloric, revealed by the use of litmus paper, and by precipitating with silver nitrate.

If the specific gravity is under 1.488, alcohol is most likely present. Aldehyde, if present, produces, when heated with caustic potash, a brownish color, and when heated with a solution of nitrate of silver, a silvery film upon the sides of the test tube.

Organic and empyreumatic substances are revealed by coloring sulphuric acid when shaken with it. If shaken with water and then the water added to cooked starch in the presence of potassium iodide, the blue color indicates the presence of chlorine.

Chloroform, if pure, should leave no residue after evaporation, nor should there be any odor left. Pictet chloroform is said to be absolutely pure.

Every patient should be carefully examined, the condition of the heart and lungs known, and that of the kidneys ascertained by the test of the urine.

If there is a condition of great prostration or collapse from any cause, then chloroform, if used at all, should be watched with the greatest care. In such cases ether is to be preferred.

Simple, uncomplicated organic disease of the heart does not necessarily preclude the use of chloroform, but ether is safer unless there be present bronchial inflammation or disease of the kidneys.

If there be found affections of the brain, chloroform is best. Examine the mouth to ascertain whether there are false teeth or plates, and if present, insist upon their removal.

The proper preparation of a patient will require abstinence from food for four or five hours prior to the operation, the promotion of a tranquil state of mind by cheerful and assuring conversation. One or two tablespoonfuls of whiskey should be given a half hour before, or, in lieu of this, $\frac{1}{4}$ grain of morphia with atropia, or $\frac{1}{4}$ grain sulphate of spartein may be used hypodermically.

Rosenberg observes that cardiac syncope is an incident of reflex origin, due to an excitation of the peripheral terminations of the trigeminus in the nasal membrane. He thinks that the local use of a spray of a 2 p. c. solution of cocaine in the nose will suppress all the phenomena of reflex irritation and eliminate much of the danger incident to chloroform anesthesia.

All clothing which will in any way interfere with respiration, should be loosened. If the weather is cool, see that the body and limbs are warmly protected.

The best and safest mode of administering the anesthetic is that which will procure anesthesia with the least degree of resistance and struggling. The simpler the apparatus the better.

Many of the various forms of inhalers are complicated and hard to keep clean. The simple wire mask covered with cloth, upon which the chloroform is dropped, is both efficient, economical and cleanly.

In the use of chloroform with the cone, and with many of the inhalers, it is impossible to estimate the amount of chloroform the patient actually inhales. It is not the amount of chloroform which has been poured upon the cone, but the quantity which has passed into the circulation which is the vital question.

In order to obviate this difficulty, I have adopted the plan of vaporizing the anesthetic from an atomizer, the bottle being so graduated as to indicate at a glance exactly how much is being used. As chloroform is thrown into the inhaler or cone none is wasted, but all passes directly to the lungs, and there can be no uncertainty as to the amount used.

The first inhalations should only be commenced when the surgeon has so far advanced in his preparations as to insure no delay in commencing the operation as soon as the patient is fully anesthetized. To have to keep the patient under the anesthetic five or ten minutes, while the surgeon completes his preparations, is to jeopardize his chances to that extent.

The inhalations should be commenced so gradually and the vapor so largely admixed with air as not to induce struggling, coughing or strangling. If either of these conditions supervenes, it indicates the necessity for the admission of more air.

The pulse and respiration should both be watched closely, and the first irregularity noted in either or both should be instantly followed by a withdrawal of the anesthetic and a substitution for it of oxygen gas.

The sensibility of the cornea should be noted and the pupil closely watched. After the pupil has been contracted, to note a sudden and wide dilation should be accepted as a warning of danger and promptly acted upon.

Every known means of resuscitation should be at hand so as to be used without delay when needed, for only then can efforts be effective.

It would be well, therefore, for every one who is often called upon to administer anesthetics, to be provided with a regular anesthetic case containing every appliance and remedy that can be of service in any possible emergency.

There should be found in it, besides a bottle of tested chloroform and a can of pure ether, the most convenient appliances for administration, a cylinder of compressed oxygen, provided with the necessary tubing for attachment to a face-mask or to a soft rubber laryngeal tube, the use of which may be necessary if artificial respiration is required. The attachments should also be arranged so as to be able quickly to substitute it for the chloroform vapor when any threatening symptoms are noticed.

In this case there should be a hypodermic syringe ready for instant use, together with prepared standard solutions of strychnia, atropia, digitalis and nitro-glycerine.

In an emergency, to consume four or five minutes in preparing the hypodermic solution is to lose valuable time which may cost the patient his life. Everything done should be without delay. Therefore all solutions for hypodermic use should be prepared and ready for instant use. An inspirator may possibly be needed to relieve the engorged right heart.

A vial of good whiskey should not be overlooked, and one of ammonia may be needed; also a few pearls of nitrite of amyl.

It is questionable whether a faradic battery can be of any real service. Some even contend that its use is harmful rather than good.

The ever-watchful chloroformist, not the surgeon, should be the first to note signs of danger, such as the irregular breathing or the failing pulse, the sudden pallor of countenance, the rapid and wide dilatation of pupil previously contracted. As soon as any of these signs of warning are noted, the chloroform should be instantly withdrawn, the head lowered by removal of the pillow, and even by allowing it to hang over the edge of the table. As claimed by Bard, this position has special advantages, in that it lessens the friction of the inspired and expired air, raises the epiglottis, occludes the esophagus, opens the epiglottis, diminishes liability to syncope, prevents stertor and increases the capacity of the thorax. The feet should be elevated, the chest compressed, so as to expel, as far as possible, the contained air which is saturated with chloroform not yet absorbed.

If no efforts at breathing are yet noticed, artificial respiration should be at once instituted and kept up as long as there is any hope of success. While artificial respiration is being practiced oxygen gas should be given so as to quickly displace the chloroform still present in the system. If the heart is still beating, though weak, inject hypodermically $\frac{1}{30}$ grain of strychnia nitrate, or $\frac{1}{100}$ grain of nitro-glycerine. Whiskey should also be given subcutaneously.

As in the asphyxia of the new-born, the sudden impression of cold, as by the application of ether to the surface, or the insertion of an ice-pencil in the rectum, may cause a quick inspiration which will turn the tide from death to life.

The responsibility of the anesthetizer does not cease with the termination of the operation, but only upon the return to complete consciousness. And he should be fully assured of the satisfactory condition of the patient before he leaves the room.

The nausea and vomiting, so often troublesome and annoying to the patient and jeopardizing the success of the operation, may be greatly lessened, if not entirely prevented, by following the chloroform with a few gallons of oxygen gas. By this method the effects of the chloroform are quickly dissipated and the return to consciousness the sooner attained.

No one should assume the rôle of an anesthetizer who is not fully impressed with the responsibility of his position, and willing to give his undivided attention to the duties devolving upon him. Surgeons sometimes rashly commit this work to junior assistants, or even to students, who are more interested in watching the steps of the operation than in attending to the duty assigned them. Fatal result is too often the consequence, only discovered by the surgeon from the cessation of hemorrhage. Precious time may thus have been lost, and with it the opportunity of applying successful efforts at resuscitation.

If the precautions herein mentioned should be always followed, I am convinced we would seldom hear of a death under chloroform.—*American Practioner and News.*

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ROBERT D. JEWETT, M.D., EDITOR.

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All communications, either of a literary or business nature, should be addressed to, and remittances made by P, O. Order, Draft or Registered Letter, payable to ROBERT D. JEWETT, M.D., P. O. Drawer 825, Wilmington, N. C.

Editorial.

The Feeble-Minded and Epileptics.

This is a class of unfortunates for the care of whom our State makes no provision, and yet they are entitled to State aid and should be provided with a special home. They are in the majority of cases dependent, being the offspring of poor and ignorant parents. The insane asylum is not the place for them, and yet the feeble-minded should not be permitted to be at large. They are irresponsible, and, while more likely to bring disaster upon themselves than others, they are, to a great extent, dangerous. We know of the case of a negro boy entering the room where some little girls were sleeping. He gained entrance through a window, opening on a roof, and awakened the oldest of the children by touching her. He made his escape, but was captured the next morning and sent to the asylum. Had he been responsible he would have been hung, and yet that boy, or man, for he is of age, is *again at liberty* in less than twelve months after his admission to the asylum.

In the State of Michigan a Home for Feeble-minded and Epileptics has just been formally opened. The institution consists of three buildings and cost about $50,000. The furnishings cost about $10,000 more.

Such an institution would relieve

our asylums of a part of their burden. Some of these unfortunates are being cared for, or rather kept, at the county homes, but there are exceedingly few of these who receive the care they should have. The average county home is not a Garden of Eden, and is not a suitable place for either a feeble-minded person or an epileptic.

This would be a suitable subject for the attention of the Legislative Committee of the Society.

Priority in Medical Legislation.

The *Virginia Medical Monthly*, in an editorial on "Reciprocity Between State Boards of Medical Examiners," makes the following statement: "North Carolina and Alabama, in the very organization of their State Medical Societies, secured laws requiring examinations of those offering to join their bodies, and they did good. But Virginia was the first State to secure the passage of such laws and to carry them out in such a way as to be thorough in their application to any and all proposing to practice within the boundaries of the Commonwealth."

The Medical Society of the State of North Carolina was organized in 1849, and the first medical laws were enacted by the Legislature of 1858–9. These laws were not enacted to regulate the standing of the members of the Society, the Society's own laws would do that, but was intended as the entering wedge, which should open up the way for better laws in the future. These laws did not make it a misdemeanor to practice medicine without a license, but it debarred those so practicing from the collection of their bills by process of law—a negative but not a positive penalty. It was a new thing and the people had to be educated gradually into a knowledge of its importance. It was an innovation, an interference with the rights of men, as it were, and any attempt to have enacted such laws as we have now would have fallen still-born. Committees were appointed by the Society session after session to memorialize the Legislature with the object of securing more stringent laws, but it was not until the session of 1885, on the 23d of February, that the law was amended, making it a misdemeanor to practice medicine without a license from the State Board of Examiners.

To the Old North State belongs the honor of being the pioneer in the establishment of laws governing the practice of medicine, to her brave and persevering physicians belongs the credit of hewing out the path through the tanglewood of public opinion, which others seeing have been easily induced to follow.

Tabes Dorsalis.—If a person has paroxysmal vomiting and complains occasionally of violent rheumatoid pains in the legs, examine most carefully for tabes. You will very frequently be greatly surprised at the ease with which you can make the diagnosis.—*Dr. Hirt.*

Reviews and Book Notices.

Index-Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and Subjects. Vol. XVI. W.—Zythus. Government Printing Office, Washington, D. C., 1895.

This volume completes the first series of the Index-Catalogue. This great work, so useful to the profession of the country, was begun by Dr. John S. Billings in 1873. It has proven an enormous work for him and his able assistants, chief among whom was Dr. Robert Fletcher. When the work was begun it was estimated that it would require five volumes of about 1,000 pages each, but the appearance of the Specimen Fasciculus attracted so much attention that contributions poured in, and now, after the completion of sixteen volumes, there is matter sufficient to make five volumes of the new series. The manuscript for the second series has been prepared, and as the appropriation for printing Volume I. has already been granted by Congress, the work will proceed without delay. The Library now includes 116,847 books and 191,598 pamphlets. The author states that nearly all medical writers now living have donated to the Library at least one pamphlet, but he gives a list of fifty contributors who have been especially liberal, and among these we see the names of Dr. E. A. Anderson and Dr. Thomas F. Wood, of Wilmington.

Dr. Billings says: "This is probably the last volume of the Index-Catalogue which will be issued under my personal supervision, and, in closing the work, I can only say that it has been to me a 'labor of love,' and that I am very thankful that I have been allowed to complete it, so far as the first series is concerned."

With this volume is a supplement of 282 pages, giving an alphabetical list of Abbreviations of Titles of Medical Periodicals Employed in the Index-Catalogue.

The Archives of Pediatrics

Will commence its 13th year with the January issue, under the business management of Mr. E. B Treat, of New York. For twelve years the "Archives" has been the only journal in the English language devoted exclusively to "Diseases of Children," and has always maintained a high standard of excellence. The new management contemplate general improvements, including an increase of matter and an increased corps of collaborators. We are pleased to note these evidences of prosperity in the career of this truly valuable periodical, and feel quite sure that the new management will leave no stone unturned in their effort to keep it at the highest standard.

The American Year Book of Medicine and Surgery

Is the title of a new Annual announced by Mr. W. B. Saunders, of Philadelphia. The first volume will be ready for delivery January 1st next. It will be under the editorial management of Dr. George M. Gould, whose experience peculiarly qualifies him for the preparation of such a work. The work will be a review, in one volume, of the valuable contributions to the journals of America and of Europe. These will not be a retrospect of news one or two years old, but the treatment presented will be synthetic and dogmatic, and will include only what is new.

Abstracts.

RHEUMATISM.—(Dr. D. W. Fenton, *Jour. of the Med. Sciences.*) It is well known that rheumatism may, and often does, attack any of the structures having a synovial or serous membrane for a lining. These are the cerebral and spinal meninges and ventricles of the brain, the eye, the middle ear, all the joints and bursæ, the sheaths of the tendons, the pleura, the peritoneum, the cavities and valves of the heart, the pericardium, and lastly, the whole arterial system. The articulations are probably more frequently affected in the acute form, and the cavity and valves of the heart next in point of frequency, but all the structures mentioned may be affected either in the acute or subacute form of the disease, and the number and order of the locations affected may vary within wide limits. So that we may have rheumatism affecting the joints alone, the tendinous sheaths alone, the endo- or pericardium alone, or all of them, and in all of these it may assume the acute form, with fever and constitutional disturbance, or it may be sub-acute or chronic. While the reverse is usually the rule, the heart may be the first organ attacked, and when the heart affection is secondary, the severity of the disease in other parts is no guide to the severity of the endo-cardial or valvular trouble. In the matter of treatment there seems to be no specific. Digitalis is of particular value in the dangerous periods of threatened heart-failure. Spartiene sulphate and nitro-glycerine are also useful, stimulating the heart without the contraction of the arterioles. Convallaria majalis and cactus grandiflora seem better adapted to mild or not advanced cases. Ergot has done good service in controlling the congestion and hyperæmia of the brain and spinal cord. To sum up:

1. Rheumatism is not merely an affection of the joints, but a serious constitutional disease, which often kills its victim outright, or failing in that, lays the foundation for chronic invalidism and lingering and painful death in after years.

2. Rheumatism affects so great a number of different structures that it practically gives rise to a variety of different affections, from a swollen and painful toe-joint to a dangerous meningitis, from an inflammation of the middle ear to a temporary paralysis of both lower limbs.

3. The heart may be the first organ or the only one attacked; hence the urgent necessity of examining that organ in every obscure case of dis-

ease, as well as in all cases of recognized rheumatism, however mild and whether it is articular in character or muscular.

4. The various forms of so-called muscular and chronic rheumatism are rheumatism, and not merely peculiar types of neuralgia, as we were at one time taught to believe.

5. Digitalis, sulphate of sparteine and nitro-glycerine are our sheet-anchors in threatened heart-failure from endocarditis.

6. Every case of rheumatism, whether severe or not, and whether it be acute, sub-acute or chronic, should be considered important, and everything possible done to arrest it before it attacks important organs or produces changes in them that may cause death or serious chronic disease.

LAPAROTOMY IN TUBERCULOUS PERITONITIS.—(Wherry, *The Lancet.*) The author reports a case of tubercular peritonitis operated upon by abdominal section with irrigation, followed by good results. The patient, a young woman, aged 19, was admitted to Addenbrooke Hospital in January, 1895. Had a good family history and a healthy life previously to the present sickness, which dated back six months. For three months had had a dry, hacking cough, with pain in right side, which lasted three weeks and was followed by shortness of breath. The abdomen had been gradually growing bigger for about nine months. No blood-spitting or night-sweats. In the chest exaggerated breathing sounds on the left side, while the right was dull throughout and breathing diminished; no pectoriloquy: occasional crepitus at the apex due to friction; no cough or expectoration; abdomen distended, bulging in the flanks, with dulness extending half way tot he umbilicus; circumference of abdomen at umbilicus 35 inches. Operation on February 12th. Through a medium abdominal incision three inches long, fifteen pints of fluid were evacuated. There was no evidence of pus or lymph; the whole of the peritoneal lining of the abdomen and bowels within sight or touch, was thickly studded with tubercles, varying in size from a pin's head to a pea. The right ovary felt like a nutmeg-grater. Warm boric douching was used and the abdomen closed as after ovariotomy. The wound was healed on the twelfth day, the patient's condition having already improved. The temperature, which before the operation was 100° in the evenings, was continuously normal. A certain amount of fluid collected afterward, but patient was able to leave the hospital on the 23d of March. This fluid did not seem to grow any less until May, when, with the advent of warm weather, rapid improvement set in, and by September 3d her progress to recovery was complete. She weighed then 143 pounds, and there were no active lung symptoms. The size of the abdomen was normal; she did her work, walked, danced and led the ordinary healthy life of a girl of her age full of vitality.

We must not expect that patients will be cured when all the cavities of the body are full of tubercle, but every chance should be given to surgical procedure as a most powerful remedial agent in tuberculous peritonitis. By laparotomy the fluid is thoroughly drawn off and the tension is relieved, and whether douching is more than accessory to drainage it is difficult to say. Certainly tapping the abdomen alone makes no such favorable impression on the disorder. Improvement in health may be expected to follow operation, and so give a chance for cure of other foci of tuberculous disease.

EMPYEMA OF FRONTAL SINUS. — (G. Martin, *Annales de Medicine.*) It is not easy to diagnose an empyema of the frontal sinus attended with a bulging backward and downward of the orbital plate. Catheterism through the nares is most practicable, but this manœuvre is extremely difficult in the normal state, though simple and effective when the sinus is distended. Amaurosis and amblyopia are present in certain cases when the pus takes a backward direction and presses on the optic nerve as it enters the orbit. Pain is constant, the visual field is narrowed and the disturbances of all the ocular functions are extreme. In all these cases one should first endeavor to drain through the nose, but if this fails, resort must be had to the trephine, though this leaves a scar.

TREATMENT OF ASIATIC CHOLERA. —(Dr. Elmer Lee, *Jour. Amer. Med. Asso.*) The time in which to treat the patient sick with cholera is exceedingly limited. What is to be done must be executed with rapidity. There is not a moment to lose between the time when the patient is first seen and the accomplishment of several practical efforts. During the epidemic of 1892 nearly every prominent remedy was used and nearly always ended in more or less disappointment. The mild chlorid of mercury, in large and small doses, salol, which was expected to work great good as an intestinal antiseptic, quinine and many others proved inadequate to arrest the disease, and the mortality of 50 p. c. or over continued to be recorded.

The cause of this disease is perhaps accurately stated to be due to invasion of the blood, and, secondarily, of all the tissues of the living organism, by toxins or ptomaines, which originate in the upper portion of the small intestine at the early stages of cholera. These products of organic activity, whether of animal or vegetable organisms, it is here unnecessary to debate; but these noxious products enter the circulation through the villi of the intestine and rapidly and desperately poison the blood. It is clearly proved that the disease is the result of general blood-poisoning from an intestinal origin. Whatever the chemic nature of the poison may ultimately be found to be, may be safely left to the bacteriologic laboratory. The practical and intensely important part that remains for physicians seeking to cure patients in times of this disease is to realize how much, as well as how little, it is within human power to do. The human organism is prostrated by a fierce and deadly poison. This poison is in the blood and in the cells of the tissues, and its work of destruction is quickly and effectually accomplished. Reflectively, to say nothing of experimental research, it would seem to me that the rational and only course that could be advocated with scientific assurance of relief, is to, as far as possible, literally cause to be removed these products which are death-dealing to the body in which they happen to be found

The locality of the development and formation of the toxin in the earlier stages is determined to be in the upper end of the small intestine; and from experience, as well as from the powers of reflective analogy, there is no doubt that the system can be saved from death if the morbid entity, the germ, is literally deluged away from the alimentary canal by the copious use of a remedy that cannot be of the slightest danger to the victim. The amount of water to be used varies in different cases. It is impossible to use too much; it is possible to use too little. From the earliest moment that the patient is seen the propositions should be, first, wash the whole alimentary canal with pure water; wash the lower portion by introducing irrigations of warm soapsuds or merely warm water into the colon sufficiently frequently and sufficient in quantity to cleanse that portion of the bowel effectually. The frequency of washing that portion of the bowel which is accessible from the rectum should be one, or two, or three, or four times a day, according to circumstances. At the same time from one to ten quarts of warm pure water mildly medicated with peroxide of hydrogen or hydrozone should be administered at regular intervals, during the day, as the prescribed remedy by the mouth. If the patient vomits, very well. Immediately reintroduce the quantity of water that was vomited. No harm can be done in any case, and if it is possible to save life, it is possible to save it through this method. It is the quickest and the surest method of exciting the activity of the kidneys, and is the safest. It is the rational and effective measure for maintaining the volume of the blood. It is the scientific process by which to establish cutaneous circulation in the capillaries.

The use of simple and useful hygienic measures are the same as in other prostrating diseases. Patients should be fed with regularity at not too frequent intervals, giving the proper time, between administrations of smple food, for its digestion. The use of appliances for maintaining the heat of the body are not to be neglected.

THE REMOVAL OF FOREIGN BODIES FROM THE CORNEA.—Mechanics and workmen have learned from oculists (who should have taught them better) the method of removing foreign bodies from the cornea by "picking them out with some sharp or slightly blunted metal instrument. In every factory or workshop every day, and often many times a day, it occurs that pins, knives, etc., are thus blunderingly used, frequently with great injury to the cornea, with the resultant formation of corneal ulcers, keratitis, iritis, or, at least, leucomata. All text-books of ophthalmology advise the use of the "corneal spud" for removing such particles, and every young physician supplies himself with the instrument. But it is the most outrageously ill-adapted for the purpose conceivable. It is impossible for any patient to hold the eye still enough to permit any hand thus to remove a partly-imbedded grain of sand, or emery, or what-not, without wounding the epithelium of the cornea. For this purpose a rigid tool is absurd, and a rigid metal instrument is the acme of absurdity. Every physician should teach workingmen how easy it is, and how free from any danger of injury, to remove the great majority of foreign bodies on the cornea with a simple wisp of cotton. Any particle not thus removable should not be sought after with penknives, awls, pins or spuds, but the patient should be sent to a physician. Twist a little wisp of absorbent cotton, having long fibres, upon itself until the fibrils are well caught, but are not too densely packed upon each other. Fold the roll upon itself and grasp it half an inch from the rounded or curved extremity. The eyelids are held apart by the fingers of the left hand and the patient instructed to look in such a direction as to bring the foreign body into view. By delicate, though firm pressure, the wisp of cotton is brushed, not too quickly, across the cornea, or it is given a slight twist or screw-like movement when deftly pressed against the cornea. Almost invariably the dust-particle is removed at the first trial, being entangled or caught by fibrils of the cotton. Cocaine, blepharostat, spud, time, labor and injury are all dispensed with and happily spared. The procedure may not be for the commercial advantage of the specialist, but it is worth more to the world than seven "original researches" and prize essays.—*Medical News.*

Puncture of the Spinal Meninges.—Prof. Furbinger (*Berlin Klin. Woch.*) states that he has now punctured the membranes more than 100 times in 86 cases. The procedure is easy. He recommends that the patient should sit up, at the same time bending well forward, and that the needle be introduced on a level with the under surface or exact extremity of the spinous process. An anæsthetic is unnecessary. Sometimes the aspiration of the fluid was found to cause pain in the neck, back or head, so that the author uses the Pravaz syringe almost exclusively. The amount of fluid withdrawn varied from a few drops to 110 c.c. The amount evacuated does not always correspond to the amount present or to the pressure. Occasionally a bloody or blood-stained fluid was withdrawn. Once, owing to pain in the legs, it was thought that a nerve-root had been pierced. In four-fifths of 37 cases of tuberculous meningitis the diagnosis was established with certainty by the presence of tubercle bacilli. Improvement is so rare that any curative action can hardly be thought of. In the author's opinion the symptom complex of this disease is not in any great measure the direct result of increased pressure. In 2 cases with meningeal symptoms in which no tubercle bacilli were found, the after-examination showed a serious meningitis. In 1 case of chronic hydrocephalus the fits lessened after the puncture; the necropsy eventually showed the hydrocephalus to be due to a tuberculous nodule in the cerebellum. In 1 case pus was withdrawn. In 3 cases of cerebral tumor there was slight improvement in the headache in 1 case. There was but slight change in a second case, which subsequently recovered under antisyphilitic treatment. In a third case sudden death occurred the day after the puncture. In a fourth case, much improved by trephining, lumbar puncture was practised owing to a relapse. The symptoms improved slightly, but death occurred twenty-four hours later. It cannot be said whether the puncture had anything to do with the sudden deaths. In 2 uræmic cases 90 and 50 c.c. of fluid were withdrawn without result. In 1 case of cerebral hemorrhage with rupture into the ventricles, blood was withdrawn, as well as in a case of hemorrhage into the cerebellum rupturing into the fourth ventricle. For diagnostic purposes spinal puncture is most valuable in tuberculous meningitis and when pus is withdrawn. In hemorrhages into the ventricles or subarachnoid space, it may also be of service. Therapeutic results are either absent or only rarely to be seen.

OFFICIAL LIST OF CHANGES IN THE PUBLIC SERVICE.

THE ARMY.

Three weeks ending October 26th, 1895:

Posse, *Major B. F.*, Surgeon U. S. Army, is granted leave of absence for thirty days.

Edie, *Capt. Guy L.*, Assistant Surgeon, is relieved from duty as Assistant Attending Surgeon, in the City of Washington.

Reynolds, *1st Lieut. Frederick P.*, Assistant Surgeon, is relieved from duty at Fort Sam Houston, Texas, and ordered to Fort Clark, Texas, for duty, relieving Capt. Benjamin L. Ten Eyck, Assistant Surgeon. Capt. Ten Eyck, on being thus relieved, is ordered to Columbus Barracks, Ohio, for duty.

Quinton, *1st Lieut. William W.*, Assistant Surgeon, will be relieved from temporary duty at Fort Logan, Colorado, to take effect upon the arrival there of Capt. W. W. Johnson, Assistant Surgeon, and ordered to Fort Rily, Kansas, for duty.

Gibson, *Lieut. Col. Joseph R.*, Deputy Surgeon General, will report in person to the President of the Army Retiring Board at Washington Barracks, D. C., at such time as he may designate for examination by the Board.

Billings, *Lieut. Col. John S.*, Deputy Surgeon General, having served over thirty years in the Army, is, on his own application and by direction of the President, retired from active service, this date, October 1, 1895.

Meriwether, *1st Lieut. Frank I.*, Assistant Surgeon, having been found incapacitated by an Army Retiring Board, on account of disability incident to the service, is, by direction of the President, retired from active service this date.

Birmingham, *Capt. Henry P.*, Assistant Surgeon, is granted leave of absence for one month, to take effect upon the arrival at Fort Trumbull, Conn., of Capt. Geo. E. Bushnell, Assistant Surgeon. Capt. George

E. Bushnell, Assistant Surgeon, will proceed to Fort Trumbull, Conn., and report for temporary duty during the absence on leave of Capt. H. P. Birmingham, Assistant Surgeon.

Rulf, 1st Lieut. John S., Assistant Surgeon U. S. Army, is granted leave of absence for one month, to take effect about November 10th, 1895, with permission to apply to the Adjutant General of the Army for an extension of one month.

Wave, 1st Lieut Isaac F., Assistant Surgeon, is granted leave of absence for one month, on surgeon's certificate of disability, with permission to leave the limits of the Department.

THE NAVY.

For the two weeks ending October 26th, 1895.

Medical Directors G. S. Beardsley and P. S. Wales ordered to duty as members of the Naval Examining Board.

Passed Assistant Surgeon J. S. Sayre, ordered to treatment at the Philadelphia Naval Hospital.

Passed Assistant Surgeon C. H. T. Lowndes detached from the Naval Hospital at Mare Island, Cal., and ordered to the Marine Rendezvous, San Francisco, and in attendance on officers in that city.

Passed Assistant Surgeon C. J. Decker, detached from the Marine Rendezvous and special duty in San Francisco and ordered to the Naval Hospital at Mare Island.

J. C. Rosenbleuth, appointed Assistant Surgeon in the Navy, October 14th, 1895.

MARINE HOSPITAL SERVICE.

Murray, R. D., Surgeon, granted leave of absence for thirty days, October 4, 1895.

Irwin, Fairfax, Surgeon, granted leave of absence for thirty days, October 4th, 1895.

Banks, C. E., P. A. Surgeon, detailed as chairman board for physical examination of officers and candidates Revenue Cutter Service, October 2–8, 1895.

Brooks, S. D., P. A. Surgeon, when relieved from temporary duty at St. Louis, Mo., to rejoin station at Chicago, Ill., October 3d, 1895.

Williams, L. L., P. A. Surgeon, to proceed from Charleston, S. C., to Waynesville, Ga., as Inspector, October 2d, 1895.

Magnuler, G. M., P. A. Surgeon, upon completion of duties at Camp Jenner, Eagle Pass, Texas, to rejoin Station at Galveston, Texas, October 11th, 1895.

Cobb, J. O., P. A. Surgeon, to proceed to Victoria, B. C., and Vancouver, Washington T., on special temporary duty, October 12th, 1895.

Brown, B. W., P. A. Surgeon, detailed as Recorder of boards for physical examination of officers and candidates Revenue Cutter Service, October 2–8, 1895.

Houghton, E. R., P. A. Surgeon, is granted leave of absence for thirty days from date of being relieved from duty at Vineyard Haven, Mass., October 5, 1895.

Prochazka, Emil, Assistant Surgeon, when relieved from temporary duty at Charleston, S. C., to proceed to Cain, Ill., for temporary duty, October 12th, 1895.

Thomas, A. R., Assistant Surgeon, relieved from temporary duty at New Orleans, La., and directed to rejoin Station at St. Louis, Mo., October 3d, 1895.

Greene, J. B., Assistant Surgeon, relieved from temporary duty at Wilmington, N. C., and directed to proceed to Vineyard Haven, Mass., and assume temporary command of the service, October 2d, 1895.

Promotions—Medical Department.

Waters, Major William E., Surgeon, to be Deputy Surgeon General, with rank of Lieut. Col., October, 1st, 1895, vice Billings, retired.

Tesson, Capt. Louis S., Assistant Surgeon, to be Surgeon, with the rank of Major, September 26th, 1895, vice Matthews, retired.

Gardner, *Capt. Edwin F.*, Assistant Surgeon, to be Surgeon, with the rank of Major, October 1st, 1895, vice Waters, promoted.

Houghton, *E. R.*, P. A. Surgeon—resignation accepted, to take effect upon expiration of leave of absence, October 5th, 1895.

Miscellaneous Items.

Under this head space will be given (free of cost) to those paid-up subscribers who desire to change their location, or to dispose of practice or property. One insertion will be allowed, but inquiries must not be ordered addressed to this office.

Any news connected with professional men and matters in North and South Carolina will be appreciated by the Editor.

FIRE AT THE UNIVERSITY OF VIRGINIA.—This noble and historic Institution sustained a most distressing accident through the destruction, by fire, on the 27th of October, of the main building, comprising the rotunda and annex. At the time of this writing the origin of the fire has not been discovered, but is said to have been located between the ceiling and the roof of the public hall. The whole building was completely gutted, causing a loss variously estimated at from $100,000 to $400,000. The old chapel and the student's reading room were blown up by dynamite, thus preventing the fire spreading to the professors' residences and the dormitories on the lawn.

The fire departments of the University and of Charlottesville were assisted by fire companies from Lynchburg and Staunton, and the students of the Institution. The ladies also lent their aid in removing the valuables from the library, and a large proportion of the books, portraits and statuary were saved. Among the last were the statues of Jefferson and the bust of Professor Minor, lately unveiled. The large copy of Raphael's painting of the School of Athens, which was in the public hall, and was valued at $5,000, was destroyed. There were many valuables lost, which cannot be replaced, and on which it would be impossible to place a money value.

Already a building committee has been appointed from among the Faculty to take steps looking to the restoration of the buildings, and the patriotism of Virginia hearts will not fail to give to the noble old Institution a building even superior to that she has lost.

We regret to learn of the serious accident that befell Mr. Floyd Williams, a medical student from this State, who was injured by the flames while assisting at the fire. We trust that his injuries will not prove serious, nor his suffering great.

LEVEL-HEADED CHINESE.—The Chinese are old fogies, but they say that a druggist who buys drugs should have two eyes, a physician who gives drugs to patients should have one eye, and a patient who takes drugs should have no eyes at all.—*Ex.*

A POULTRY DIVISION AT THE EXPERIMENT STATION.—The North Carolina Agricultural Experiment Station has added another division to the several already in operation, which will be known as the Poultry Division. Among the specific studies for this division will be, first, to ascertain the best breeds of poultry which can be recommended for different sections of the State, how to raise them economically, including the best treatment for diseases and insects, and how to prepare and ship to market all poultry products. It will be the endeavor to foster the industry in North Carolina, so that a profitable and financially paying business may be inaugurated in any locality or on any farm. As but little capital is required, the returns for the investment should always be large.

Dr. Samuel E. Woody has been elected as Dean of the Kentucky School of Medicine, to succeed Dr. Wm. H. Wathen, who had held the office for fifteen years. Dr. Wathen will retain his connection with the College as Professor of Abdominal Surgery, Obstetrics and Gynæcology.

QUITE A GRACEFUL TESTIMONIAL.—Twenty-five thousand dollars have been raised by the *London Daily Telegraph*, in shilling subscriptions, as a testimonial to Dr. W. G. Grace, the noted English cricketer.

ANTITOXIN IN NEW YORK.—A report from the President of the Health Department to the Mayor shows that the mortality from diphtheria for the first nine months of 1895, has been 43.94 per cent. less than the average mortality for the first nine months of the four preceding years. The following table gives the figures:

Year.	Cases.	Deaths.	Per. Ct.
1891	3,686	1,348	36.59
1892	4,158	1,640	37.04
1893	4,721	1,763	37.34
1894	7,446	2,284	30.67
	20,011	6,936	34.66
1895	7,921	1,643	19.43

"If the death-rate from diphtheria and croup during the first, second and third quarters of 1891–4 had been the same as in 1895, there would have been 3,048 fewer deaths in that period. The large reduction in the mortality rate from diphtheria and croup for the first three quarters of 1895 is attributed mainly by the medical officers of this department to the introduction and use of diphtheria antitoxin, and if this remedy had been generally or universally employed, the reduction in the mortality rate would doubtless have been larger."

The American Association of Obstetricians and Gynæcologists held one of its most interesting and satisfactory meetings at Chicago, September 24, 25 and 26, 1895.

The following-named were elected officers for the ensuing year: President, Dr. Joseph Price, of Philadelphia; Vice-Presidents, Drs. Albert Hawes Cordier, of Kansas City, and George Sherman Peck, of Youngstown, Ohio; Secretary, Dr. William Warren Potter, of Buffalo; Treasurer, Dr. Xavier Oswald Werder, of Pittsburg; Executive Council, Drs. Chas. A. L. Reed, of Cincinnati; James F. W. Ross, of Toronto; Albert Vander Veer, of Albany; Lewis S. McMurtry, of Louisville; and J. Henry Carstens, of Detroit. Seventeen new Fellows were also elected and added to the list.

The ninth annual meeting was appointed to be held in Richmond, Va., Tuesday, Wednesday and Thursday, September 15, 16 and 17, 1896.

Dr. S. Hassell has removed from Roper to Plymouth, N. C.

The carelessness of a male nurse in the St. Louis City Hospital has resulted in the death of one of two patients whom he poisoned with corrosive sublimate. The doses of the bichloride were administered for doses of magnesium sulphate.

DIVORCE DENIED.—A cruel statement is telegraphed from Kansas City, to the effect that one of the "New Women" who practices medicine in that town, was refused a divorce by an unfeeling judge, who asserted that the reasons urged by her were insufficient to warrant the issuance of a decree. It seems that the bill of the plaintiff alleged that the wicked husband refused to cook the meals while she was engaged in daily practice of her profession, and that he would not even help her prepare the meals, but "laid around" while she was thus engaged. The complainant's tale of woe is probably unique, and deserves more mention than it is likely to receive.—*Jour. Amer. Med. Asso.*

A Post-graduate School of Medicine has been organized in Washington City with the following members: Drs. H. L. E. Johnson, E. L. Tompkins, W. W. Johnston, Samuel C. Busey, J. Foster Scott, H. D. Fry, S. S. Adams, J. Ford Thompson, T. E. McArdle, Charles W. Richardson, James Kerr, G. N. Acker, W. H. Wilmer, M. F. Cuthbert, E. M. Parker, G. Wythe Cook and George Byrd Harrison.

TREATMENT FOR OKLAHOMA INEBRIATES.—Any inhabitant of the Territory of Oklahoma who is of kin to, or a friend of, any habitual drunkard who is resident of the Territory and the head of a family, the Legislative Assembly has ordained, may petition the Board of County Commissioners of the county of the residence of such habitual drunkard for leave to send such person, at the expense of said county, to an Institute within the Territory, for the medical treatment of drunkenness and morphinism, as said Board of County Commissioners may designate, at an expense of not to exceed $100, including board and lodging; but the sending of such person to such an institution shall be discretionary with the Commissioners, and not more than four persons shall be sent from the same county in any one year. The petition referred to must set forth, among other things, that such person or those of his kin petitioning, are not financially able to incur the expense of his cure, and that he is willing and will agree to attend such Institute for the cure of drunkenness and morphinism, as well as contain his written agreement to that effect, and that he will abide by, and comply with, the rules of such an Institute.—*Jour. American Medical Association.*

Correspondence.

THE SAMUEL D. GROSS PRIZE.

Editor N. C. Med. Journal:

The second quinquennial prize of one thousand dollars under the will of the late Samuel D. Gross, M.D., will be awarded January 1st, 1900.

The conditions annexed by the testator are that the prize "Shall be awarded every five years to the writer of the best original essay, not exceeding one hundred and fifty printed pages, octavo, in length, illustrative of some subject in Surgical Pathology or Surgical Practice, founded upon original investigations, the candidates for the prize to be American citizens.

It is expressly stipulated that the successful competitor, who receives the prize, shall publish his essay in book form, and that he shall deposit one copy of the work in the Samuel D. Gross Library of the Philadelphia Academy of Surgery.

The essays, which must be written by a single author in the English language, should be sent to Dr. J. Ewing Meares, 1429 Walnut Street, Philadelphia, before January 1, 1900.

Each essay must be distinguished by a motto, and accompanied by a sealed envelope bearing the same motto, and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay.

The Committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year.

The Committee reserves the right to make no award if the essays submitted are not considered worthy of the prize.

Very respectfully,
J. Ewing Meares, M.D.

A Death from Murphy's Button.—At a recent meeting of the New York Surgical Society, Dr. Abbe presented a specimen from a case of strangulated hernia, in which five inches of gangrenous bowel had been resected, and an anastomosis effected by Murphy's button. The patient died forty-eight hours after the operation, and it was found at a second operation, performed shortly before his death, that the weight of the button had caused it to gravitate to the bottom of the pelvis, and caused a sharp kink at the site of the anastomosis. Dr. Rushmore thought that the gut must have been paralyzed by the obstruction or the muscular coat would have been able to force the contents through the lumen of the button and straighten out the kink.—*Boston Med. and Surg. Jour.*

Tetanus Cured by Antitoxin.—Dr. Gibier, of the Pasteur Institute, has received word that a second cure of tetanus has been effected by antitoxin. The case was under care of Dr. J. F. Dyer, of Ottawa, Ill.—*Boston Med. and Surg. Jour.*

THE TREATMENT OF INTERMITTENT FEVER.

By Walter M. Flemming, M.D., New York.

Before the discovery of the tubercle bacillus, many a cough was allowed to continue without treatment and the real difficulty not suspected until a sharp hemorrhage or a hectic fever revealed the true situation. Only a few months ago diphtheria patients walked the streets with a simple sore throat, while cases of follicular tonsillitis were carefully treated as diphtheritic in character. Nearly all of us were taught that malaria was an earth-born poison, which filled the air with a "fever-generating agent."

Now, all this is changed. The tubercle bacilli can be detected in the earliest stages of phthisis. The Klebs-Loeffler bacillus decides the presence of diphtheria, and the malarial germs of Laveran tell us we have an intermittent fever.

It is natural that we look for a remedy which will destroy these germs or counteract their poisonous products. Indeed, it now appears that we have unconsciously, to be sure, been giving a perfect specific for the cause of the latter disease. Quinine is no longer administered in an empirical manner. We know precisely why we give it and what it does. Quinine exerts a deathly influence over the malarial germ, therefore it may be given with the satisfaction of knowing that it will invariably check the paroxysms of an intermittent fever. If its use is not followed by this cure, then it is certain that it never came in contact with the red corpuscles of the blood. Absorption was incomplete or the quantity of the drug was insufficient. In the light of all this it is certainly bordering on the ludicrous that the National Dispensatory should give a list of seventy-six remedies in the index under intermittent fever.

The patient has usually had a malarial paroxysm before seeking medical advice. As hepatic activity is necessary to obtain the best effect of the specific treatment, so, in cases of constipation, at least, it is better to begin the treatment with the following prescription, which should be taken five or six hours prior to the quinine:

℞.—Hydrarg. Chloridi Mite,
Sodæ Bi-carb., aa, gr. I.
M. Divide into six powders.
Sig. Take one powder every fifteen minutes, using all the powders.

This is far preferable to giving the calomel in one single dose and in larger quantity. However, it may be necessary, if the patient is insensitive to purgatives, to increase the quantity in the prescription by one-half. While this preparatory treatment is not necessary, yet it is certainly true that after its employment a less quantity of quinine is required and the general condition of the patient is improved.

It has been stated that this treatment should be given five or six hours before the specific treatment. It should now be said that the latter treatment is best inaugurated at such a time that it will be exerting its fullest physiological action when the next paroxysm is due. This time can be quite accurately stated when we remember that a paroxysm often begins an hour earlier than the preceding one, and that about three hours are required for the quinine to be in its most active condition in the body.

To insure prompt and complete absorption, the quinine is best given in liquid form. The following is a favorite prescription:

℞.—Quinia Sulph., grs. xv.
Aquæ, - - oz. j.
Acid Sulph., dil. q. s. ft. sol.

M. et Sig. Take at one dose in one-third glass of water.

With the above preparatory treatment and with the quinine dissolved, this dose is equivalent to at least twenty grains given after the usual manner; while it is certain we should not trust to pills or capsules at such a time unless we know positively that these are in a perfectly soluble condition.

To prevent the uncomfortable head symptoms which accompany full doses of quinine, and also to relieve the pain which is likely to be present at the same time of the expected paroxysms, the following prescription should be given four or five hours after the specific:

℞.—Antikamnia Tablets (5 grs. each), No. xxiv (24).

Sig. One tablet every two hours while pain necessitates.

While the above dose of quinine is sufficiently large for residents of most parts of the United States, yet in some of the Southern States and in other sections where malaria abounds with unusual force, it may be necessary to give the quinine as high as twenty, forty, or even sixty grains. But in the great majority of cases the above single dose will be sufficient to prevent a second chill.

In order that there may be no question about the recurrence of an attack, and also in order to bring the system under the influence of a good tonic, the quinine should be continued for one or two weeks in doses of 5 to 10 grains a day. As the malarial germ has left its effects on the nervous system, and often to a marked degree, so a remedy is indicated which will put at rest the disturbed condition. The following will be found satisfactory in every way:

℞.—Antikamnia and Quinine Tablets (5 grs. each), No. xxiv.

Sig. One tablet three times a day after meals.

[This tablet contains 2½ grs. sulph. quinine and 2½ grs. antikamnia, being the most desirable proportion.]

If the physician be called while the patient is suffering from a paroxysm, and he is in doubt as to its nature, he has only to remember that any intermittent fever which resists the action of quinine is not necessarily of malarial origin. Even during the chill of a malarial attack the temperature may rise to 102° or higher, while it is often true that when the chill has passed and the fever is on, the thermometer will show a lower degree of heat. Therefore, no better treatment can be given at the beginning of or during the chill, than the following:

℞.—Antikamnia Tablets (5 grains each), No. xxiv.

Sig. Take two tablets immediately. Repeat dose in two hours if pain necessitates.

The antikamnia will relieve the congestion of the abdominal and thoracic organs and will materially alleviate the headache of the second stage especially. In fact, it practically robs the fever of its most distressing features.

When we consider that the cause of intermittent fever is so thoroughly understood and that quinine is regarded as its specific, destroying said cause, how puerile are all attempts to bring forward new substitutes. Although pain may not be dependent upon any special living organism, yet it is certain that in antikamnia we have a most reliable specific.

In regard to the treatment of all forms of febrile maladies, periodic or continued, I have found the Antikamnia Tablets, with their various combinations of codeine, salol or quinine (as indicated in each individual case) the most reliable, prompt and satisfactory remedies in controlling these intractable disorders of any remedial agent known to me in a general active practice of over thirty years.

240 Fifth Ave., New York City.

Reading Notices.

The usetulness of *good* Hypophosphites in Pulmonary and Strumous affections is generally agreed upon by the Profession.

We commend to the notice of our readers their advertisement in this number. "Robinson's Hypophosphites," also "Robinson's Hypophosphites with Wild Cherry Bark" (this is a new combination and will be found very valuable) are elegant and uniformly active preparations; the presence in them of Quinine, Strychnine, Iron, etc., adding highly to their tonic value.

Philadelphia, Dec. 8, 1894.

It gives me much pleasure to testify to the usefulness of your Syrup of Hypophosphites, since my attention was called to it. I have used the syrup in laryngeal and pulmonary tuberculosis and strumous diathesis, so common in children. The result has far exceeded my greatest expectation.

J. A. Irwin, M.D.,
Late Assistant Children's Department and Assistant Gynæcological Department Jefferson College Hospital.

Cocaine in Surgery. — Reches again calls attention to the use of Cocaine, and it appears is the only French surgeon who generally employs it to the exclusion of other anæsthetics. He has employed it now in 3,200 operations, with remarkable success. He describes with minutiæ all the details so necessary to observe in its use to secure satisfactory results. He always limits the strength of the solution to one per cent., and makes multiple punctures, when using it hypodermically. He advises against its adoption in those suffering from hysteria or heart disease.—*Revue des Sciences Med.*, 15 Julliet, 1895.—*Railway Surgeon.*

Diastase.—Diastase is a vegetable ferment which has the property of converting starchy foods into a soluble material called maltose. Like the ferments in the saliva and pancreatic juice, it acts in alkaline solution, but, unlike them, it continues to operate in acid media, and, therefore, its action is not disturbed by the gastric juice.

Diastase is a peculiar substance which causes the ripening of fruits and vegetables by converting their starches into dextrins and sugars; hence fruit becomes more and more digestible as it ripens.

Maltine is made of three cereals—barley, wheat and oats. *It is rich in diastase.* It may be taken either plain, with cod-liver oil, with coca wine, with pancreatin, with hypophosphites, etc., in tuberculosis and other diseases. — (*Practical Dietetics.* By W. Gilman Thompson, M.D.; pages 142 and 143.)

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Original Communications.

REMARKS ON GOITRE WITH REPORT OF CURES.

BY DR. JOSEPH A. WHITE, A. M., M.D., Professor of Ophthalmology and Associate Professor of Otology and Laryngology, University College of Medicine, Ricmond, Va.

John Beattie, age 46, a stone cutter by trade; consulted me in December, 1894, about his eyes. I prescribed the needed glasses, and noticed he had a very large goitre which I took to be a fibro-cystic enlargement of the thyroid gland, from a very cursory examination. There were several cysts, one in the right and two in the left lobe of the gland. I asked why he did not have it treated, and his reply was that he had given up; although it was steadily increasing in size. It had begun about fifteen years previous, as far as he could recollect, and for over twelve years had been a marked deformity. He had tried iodine injections, tapping sac with an aspirator, the constant current, and, as he expressed it, the "electric needle."

On June 27, 1895, he returned and asked me what could be done with the goitre, as it was becoming an impediment to respiration because of compression of the windpipe. Having had very satisfactory results with iodide of potassium by cataphoresis in goitrous cases, I commenced treatment with this plan. Up to Wednesday, July 27th, I had used cataphoresis twelve times with some slight diminution of the tumor and improvement to respiration. On July 17th, I opened the central cyst at the bottom, and drained off a quantity of dark brownish muddy fluid, similar to what is seen in ovarian cysts, etc. The sac was washed out until the returning liquid was clear, and a small quantity of iodine injected. The opening was kept free by packing with gauze. For several days, the sac was washed out and packed daily, with considerable improvement. On July 27th, I cut into the left cyst from the top, and passed the knife across and out at the opening made in the lower part of the central cyst, which was followed by a discharge of the same fluid and venous hemorrhage. Iodine was injected, and a silver drainage wire was inserted, entering one opening and out through the other, and antiseptic gauze packed into the cyst. The next day, he was unable to come to my office, being confined to bed. He was visited twice daily, and the sac was washed out with peroxide of hydrogen and bichloride of mercury. On the 31st, his neck was enormously swollen, especially on the right side—all the lymphatics being involved—and deglutition was almost entirely arrested. I at once cut into the right cyst and drew off a great quantity of fluid. This sac was connected with the others, and a drainage wire with packing, inserted. Every day the sacs were washed out, disinfected and packed. Quinine and stimulants were used internally. On August 4th, his temperature rose to 104°, pulse 126; and on the 5th and 6th, 101°; and in a few days normal. He was then put on potash which was increased to 60 grs. three times a day. By September, his neck was reduced almost to its normal size. Some little thickening of the parenchyma of the gland remained, although the cyst had entirely disappeared. For this, cataphoresis was continued, and you saw his condition two weeks ago when he presented himself to this Academy. From wearing a 17 inch collar, he was wearing a 14½ inch. The contour of the neck was perfectly natural. The thyroid cartilage was prominent, and, with the exception of the scars of the incision, there was little or no sign of trouble of the thyroid gland.

The above case is an interesting one in the results, and on account of the prominence which the thyroid gland has assumed in medical journals, the last year or so, especially in relation to the use of the extract of the thyroid glands of animals in the treatment of myxedema; although the subject of goitre itself, seems to have received but little attention. I find in looking over the medical journals of the last year or so, that very little is said in relation to this matter; most references to the thyroid gland being in connection with the treatment of myxedema. Goitre, however, whilst receiving but a short chapter in most text-books on surgery, is a subject of considerable importance. We have different troubles of the thyroid gland, such as acute thyroiditis; bronchocele, or goitre of different forms, such as follicular, fibrous, fibro-cystic and cystic; and that peculiar complex of symptoms, known as *exophthalmic goitre.*

I have no doubt that the reason that we only occasionally find writings upon this subject in the regular medical journals, is due to the lack of knowledge of the functions of the thyroid gland, and the difficulty of explaining etiologically, the various changes that take place. Some recent investigations into the functions of the gland by Hurthle, Eulenberg and others, may result in a better understanding of the pathological alterations. Hurthle reports that the colloid substance in the follicles is produced by the protoplasm in the epithelial cells, and that the secretion of the gland consists in the formation of this colloid substance. It is supposed that pathological change in the gland is due to some deterioration of this normal secretion. Probably some evidence of this is found in the fact that the same treatment, (the use of thyroid extract, for example) decreases the enlarged gland, and improves the bad results which come from the absence of it, such as myxedema. Another corroboration probably, is the well known fact that cretinism is found in connection with both hypertrophy and atrophy of the gland. Eulenberg thinks that the constitutional symptoms of exophthalmic goitre may be the direct toxic effects of absorption into the veins of the increased altered secretion of the follicles, which produces chemical changes in the constitution of the blood. If this theory is correct, the nervous origin of exophthalmic goitre must be discarded. That it is tenable, is shown by the fact that nearly the same symptoms are produced by the artificial introduction of thyroid secretion in excess. But these theories in regard to the etiology of the pathological changes of the thyroid gland are somewhat speculative as yet, and require further investigation and confirmation.

The treatment of troubles of the thyroid has received lately, considerable impetus. We might divide it into Medicinal, Electrical and Operative.

Medicinal—The medical treatment is by the internal administration of suggested remedies, such as iodide of potash, fluoric acid, thyroid extract, etc., and locally, by the introduction in the substance of the gland of iodine, iodoform, etc. Everyone is familiar with the iodine treatment. It is the oldest, and has held its ground longer than any other, with varying success. Probably 90 per cent. of follicular and fibro-cystic goitres are reduced in volume by this treatment, but few radical cures are recorded. Garé of Tübingen, reports, however, very great success with the injection of iodoform, one part to seven of oil, and ether. Kocher, of Berne, has used thyroid extract in twelve cases, all of which were improved, some cured. Bruns of Tübingen also tried feeding in twelve cases, with fresh calf thyoid. Four or five cases were cured, and the others, with the exception of three, much improved.

Electrical—Under this heading, I would include three methods of using electricity. First, galvanism, by passiug the continuous current through the gland, both poles being on the tumor; second by electrolysis, and third, by cataphoresis. With the use of the constant current, I have had little or no experience. It has been suggested for the reduction of the different kinds of glandular enlargements, and has been used with varying success. Electrolysis, I have used in follicular and fibrous goitre. The negative pole is generally passed into the growth, and a current of ten milliamperes is turned on and continued for about five or ten minutes. This can be repeated in from three days to a week, according to the amount of irritation set up; the strength of the current being increased until we can use as much as forty or fifty millidmperes. Gradual reduction of the growth takes place under this treatment, and a number of cures are recorded as its result. It is of very little service, however, in cystic goitre, because we can't get the effect of the negative pole in the alteration of the tissue of the growth as we do in the more solid tumors. It has been suggested to tap the cyst, wash it out, fill it to distension with chloride of sodium solution, and by this means, receive the full effects. With electrolysis, four or five to a dozen or more sittings are required.

CATAPHORESIS—The third method, that of cataphoresis or the introduction of remedies by the direction of the electric current, has been in my hand a very satisfactory treatment, particularly in follicular goitre. I can record two or three cases in the last eighteen months where I have had the most satisfactory results from the use of iodide of potash by this method. I use, attached to the positive pole, a metal disc which is covered with wet chamois or cotton upon which is packed as much powdered iodide of potash as it will hold. This is covered over with a thin pledget of wet cotton and applied to the growth. The negative pole is held in the hand, or applied to the back of the neck, or between the shoulder blades. I have seen very little notice of this method of treatment. The only case that I know of recorded, was one reported by Dr. McGuire two or three years ago, in the *Virginia Medical Monthly*. In the goitrous enlargement or bronchocele, which one observes in young people, young girls especially, about the time of puberty, I don't know any more satisfactory treatment. It is true that this form of bronchocele occasionally manifests itself unless at the time, or during the period of, menstruation and very frequently gets well of itself. I am not, however, referring to this form, but to those cases of persistent enlargement of the gland, which not only is seen during the menstrual period, but is present more or less all the time until active measures are instituted for its relief. I have seen cases of follicular bronchocele that have become very large in women because no attention was paid to it in the stage where it would swell up and go down as it were, on the theory that it would get well of itself. One of these was very large, and persisted for several years, and was cured by the application of iodide of potash by cataphoresis. This case I have already mentioned, and it is one known to most of you. I am satisfied that further investigation into this method of applying remedies, will show it to be of great value. In regard to operation, I am satisfied that in cutting open the cysts, as I did in the case above recorded, that I was exposing this patient to as great danger as if I had removed part of the gland. This was evidenced by the symptoms that developed.

Partial thyroidectomy, or strumectomy as some call it, is recommended by many authors for follicular and fibrous goitre. Storm of Christiana, has reported quite a number of operations with success. He also advises enucleation of the cyst for cystic goitre.

Morris, in the *Lancet*, January 25, 1895, reports five cases of bronchocele operated on for urgent pressure symptoms, (all the cases being of comparatively short duration) in which he had good results, and he advises removal of the isthmus and as much of the lateral lobes as may be needed to relieve pressure which is followed by atrophy of the rest of the gland.

Brooks reports two cases of partial thyroidectomy followed by success.

Operation has also been suggested and performed by quite a number of authors for exophthalmic goitre on the ground that it is a hyperplasia of the gland structure, and that the nervous symptoms are due to the toxic effects of the altered secretions, and a number of cures are reported. Greenfield's article in the *British Medical Journal*, December 1893, is probably the best of these contributions. All operators, however, have come to one conclusion—that complete removal of the gland is unjustifiable, and that all operations are more or less dangerous, death on the table having resulted in a number of cases from collapse. It is doubtful that any deaths have resulted from hemorrhage, although in some cases the bleeding is hard to control because of the difficulty of applying ligatures to the vessels whose walls are in such a condition that ligatures will tear loose. To arrest the bleeding by packing is not satisfactory and may be dangerous. If proper care is taken in performing the operation, the bleeding arrested as the operation proceeds, and the field kept as aseptic as possible, I believe the operation of partial thyroidectomy would be comparatively safe. Care must also be taken not to injure the recurrent laryngeal nerve. This operation has been successful in a great many instances, but there have been some failures, as is the case with all operations in surgery.

DISCUSSION.

Dr. Chas. N. Shields remarked that up to five or six years ago he had been treating goitre with electrolysis by the labile method—a pole on either side of the tumor. In two cases a cure was permanent. Three-quarters of the cases in girls occur at puberty and as these cases get well anyway, it is doubtful that the cure was the result of electrolysis. For the last four or five years, the doctor has been treating goitre by cataphoresis as described by Dr. White. In three cases, the results were good. In the first case, the neck was reduced one and one-half inches to normal. In the second, there was marked improvement, but reduction was not complete. The third had been treated previously and reduced one and one-half inches. Under Dr. Shields' treatment reduction was permanent. Another case was that of a young Italian affected by goitre for eight years. He had been treated in Italy by injection and electrolysis. The growth was cystic and looked suppurative. Counterpuncture was done and the tumor washed out every other day with peroxide of hydrogen. It was larger than a hen's egg, but now, there is no perceptible enlargement. Results, as a whole, however, are such as never to make him promise permanent cure.

Dr; Jacob Michaux said that in doing a tracheotomy in a child with diphtheria, he was obliged to go through the isthmus of the thyroid gland; and the amount of hemorrhage ensuing made him fear greatly for the safety of the child.

Dr, W. W. Parker never fails to stop goitre in the formative stage, by a blister applied every ten days.

Dr. J. W. Henson spoke of the operation of opening the deep fascia and stitching it to the integument.

Dr. White, in closing the discussion, stated that he had listened to the remarks with interest; that he had only known the evening before that he was to be called on to open the discussion on goitre; and that he regretted the brevity and necessary incompleteness of his remarks, limited as they were mainly to his own experiences and his recollections of what others had said and written in relation to bronchocele; but that he would try to reply to the gentlemen who had spoken on the subject he had introduced.

In regard to Dr. Michaux's remarks as to the danger from cutting through the isthmus, he had learned from his experience that this was one of the traditions in the profession used to scare timid operators, like the nursery ghost stories to quiet refractory children. He had often, in doing tracheotomy in a hurry, to open the trachea without regarding the isthmus; and whilst he had seen considerable bleeding—which usually stopped on inserting the tube—he had never seen a dangerous hemorrhage. Once he was called at midnight to a man who had been apparently suffocated by the pressure of an enormous goitre, and was obliged to open the trachea by candle-light as quickly as possible. Dr. O'Brien of Alexandria, assisted him on that occasion, and he cut directly through the centre of a fibrous goitre three inches thick, without regard to hemorrhage, until he reached the trachea which was opened; and the man was resuscitated by artificial respiration. Even then the hemorrhage, whilst considerable, was not dangerous in amount.

He was glad to know that Dr. Shields' experience with the cataphoratic action of electricity had been favorable, but did not think it necessary to put the remedy on both poles, as the positive pole was the active agent in inducting the remedies into the tissues. He thought also, that Dr. Shields' idea of electrolysis was rather different from the common acceptation of that term, inasmuch as he seemed to confound the passage of the *constant current*, or galvarism, through the growth, with the destructive actionof the negative pole introduced directly into the tumor—the term *electrolysis* referring only to the latter.

Dr. Parker's experience with goitre was more favorable than his own; especially in the lucky circumstances that he always saw them just in their incipiency when counter-irritation with blisters was sufficient to cure. All the goitres he had ever seen were well developed tumors of long standing when the case applied to him. On one occasion, however, he had seen an enlargement of the thyroid cured by a blister. It was a case of non-suppurative thyroiditis, the only one he ever saw, which developed so rapidly in a very short time as to theaten suffocation. He, at once, applied an ointment of red iodide of mercury and iodide of potash all over the front of the neck, producing an enormous blister and in a few hours, promptly relieving the patient. Meanwhile, he sat by expecting at any time to be obliged to open the trachea.

Dr. Henson was quite right in saying he had seen report of merely opening the deep fascia in goitre, as it was an operation suggested to relieve dyspnœa from pressure of the glands on the trachea, but Dr. White had never seen a case of cure recorded, from this method; although it was quite within the bounds of probability that after relieving the pressure of the fascia upon the gland, atrophy of the gland might have ensued; and, therefore, it is not at all improbable that he had seen a report of a case cured by this operation, although it was performed merely for the relief of suffocative symptoms and not to cure the goitre.

ACUTE COCAINE-POISONING.*

By M. V. Ball, M.D., Philadelphia, Pa.

In presenting this report of a case of acute cocaine-poisoning, I doubt whether I can offer anything new, and yet there are several interesting points to be noted.

The literature on cocaine intoxication, though widely scattered, is, however, quite extensive. Mattison, of Brooklyn, and Germain Sée, of Paris, have each reported, in 1892, two hundred and more cases of poisoning, with twenty deaths. Since then quite a number of deaths have been recorded in medical journals.

The dose at which fatal poisoning has occurred varied within marked limits. In five fatal cases reported by Manheim, the quantity of the alkaloid taken was over 15 grains. In two cases reported by Mattison, death occurred after the hypodermic injection of $\frac{2}{3}$ grain.

Symptoms of poisoning has set in when the drug was administered by the stomach, when thrown into urethera, nose, ear, rectum, or when injected under skin or into the gums; or when simply rubbed over the surface of the face.

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*Read before Philadelphia Medical Association October 9, 1895.

Absorption is very rapid, and in some of the cases reported the operator barely had time to withdraw the needle of his syringe before symptoms of intoxication set in.

The symptoms described in each case differ greatly, and there are all stages, from slight incoherency in speech with dizziness and dilated pupils to excited hallucinatory delirium, thready uncountable pulse, convulsive breathing, or sudden collapse, or marked tetanic spasms.

Cocaine-poisoning exhibits the symptoms of strychnine-poisoning in some cases, in others that of alcohol, and in some a mixture of both.

I will now describe the case in question:

Mrs. C., aged thirty-five years, white, a sufferer for ten years past from rectal stricture, accustomed to use cocaine locally on pledget of cotton in the rectum, being tired of her existence resolved to end her life by swallowing 25 c.cm. (6 drachms) of 5 per cent. solution of cocaine, equal to about 1¼ grammes (18½ grains) of the alkaloid.

The dryness in the throat was speedily produced, and in attempting to get up from her couch to ring for the servant she felt dizzy and fell to the floor. A young medical student living in the house, and summoned at once, found her in a raging delirum. She wanted to throw herself from the balcony. She talked loudly, incessantly and incoherently. She was restrained by physical means, and when the student endeavored to give her a hypodermic of morphine she resisted, and would not allow him to do so. He persuaded her to take the tablets by the mouth, and so ⅓ grain was administered. It was about half an hour after that I saw the patient. She was held down on the bed by her friends, and was gesticulating wildly, yet was able to recognize me as soon as I entered the room, appealing to me for help. I suffered her to be released, when immediately rushing past me she made for the open window to fling herself out. This she was prevented from doing, remarking, as she was led back to her couch, that after all "she wanted to look pretty when she died."

Her pupils were widely dilated, the pulse hardly perceptible and very frequent. The tongue would be protruded spasmodically, and teeth gritted together in a tetanoid manner. She talked incessantly. In a few minutes I was able to gain control over her without using physical restraint; and, though she talked irrationally at times, her delirium was less marked, and she told me that she was not going to get over the effects, nor would she allow me to give her an antidote; in the next breath she would ask me to listen to her singing or recitation. Frequently looking at her hands they appeared dirty to her, and she would rub them. Her tongue was much congested, bluish anæsthetic. Her throat was very dry; other parts of the body tested superficially gave no indication of anæsthesia.

Respirations were normal. Temperature normal. Pulse, when counted, was 140. She stated that she felt glorious, never so happy before. Wanted to drink champagne, and when it was brought to her forgot that she asked for it. Delusions of persecutions were present to a slight degree, and her most intimate friend was accused of treachery and underhandedness. She was desirous of moving around, wanted to leave the house and visit a place she had not thought of for many years. Gradually a feeling of tiredness supervened, talk became less lively, bodily sensations were now complained of, and especially great thirst, which water or ice had no power to quench. Lemon and vinegar applied to lips were tasted, showing that sense of taste was not entirely absent.

Pulse still very frequent and small. Was able to administer black coffee and lukewarm water, and thus induce free emesis. At this time, which was two hours after the cocaine had been swallowed, the patient was resting quietly, with her pulse stronger, but still rapid. Thirst was extreme, and in attempting to go to bath-room she found her legs almost useless. The urine was passed. Strychnine, grain $\frac{1}{30}$, was administered by mouth, and some champagne was given. Perspiration started on skin, and the former pallid condition of face changed to a slight glow. Four hours after the initial onset the patient was sleeping soundly, and the pulse went down to 100, but was much stronger. Consciousness entirely returned, but no recollection of time and little of previous events, although she remembered when I came in. Next morning she was very weak, her body felt bruised, and her limbs heavy and almost useless. Feces and urine had been passed without trouble. No appetite. Tongue and throat still much parched, and thirst still present. Congestion of tongue was gone, and normal sensations had returned.

A history of a previous overdose was obtained. The alkaloid in dry state was taken by mistake, and an active delirum much worse than the one just recorded occurred. Morphine was administered in large quantities at the time.

Very few cases are on record of recovery from so large a dose as the one taken in this case, although in a case where 22 grains were given by mistake by the mouth patient died almost immediately.

Forty grains have been taken daily by persons habituated to its use. And recovery would probably not have occurred were it not that patient was under the influence of the drug more or less for some time past.

One of the earliest, possibly the first, case of cocaine-poisoning is recorded by H. Ploss, in the *Zeitschrift für Medicin, Chirurgie und Geburtshilfe*, vol. ii., 1863.

Nieman, who was the first to isolate the alkaloid, and gave it the name it now bears, made known his discovery in 1859, but this fact was known to a certain apothecary, who was experimenting with coca leaves, and who, in 1863, thought he obtained a poison from them as fatal in its effects as strychnine. He took of this extract a considerable quantity with a view of ending his earthly existence, and while waiting for the drug to take effect he joined some friends in a beer hall and indulged in a few mugs of beer; he then retired to his bed and fell into sleep. Some three and a half hours after he took the poison he awakened with severe thirst and dryness in mouth, dizziness in head, and in attempting to walk across the room his legs gave way. He was unconscious then of what occurred until the morning, but from the appearance of his room he must have been rather active. In the morning he felt very weak, and still dry in mouth and thirst.

In the cases of poisoning that I have been able to collect, frequency of pulse, dilation of pupils, convulsive twitchings of face and general convulsions, respiratory muscle spasm, unconsciousness, excited delirium, suppression of urine, and cyanosis are the symptoms most common.

The delirium is to be distinguished from alcoholic delirium from the absence of frightful hallucinations. Hallucinations are rarely present: One, the so-called cocaine-bug, and which occurred in my patient, is believed by Erlenmeyer to be due to disseminated scotoma.

Spots of dirt seen on white surface; as before noted in this patient, the fingers seemed black and dirty.

LeGrain states that the alcoholic tremor is wanting, but it was distinctly present in our case. The thirst and dryness of throat is a distinguishing feature. Otherwise, without a history, they seem very much alike.

Moreno Y. Maiz (*Recherches Chemique et Physiologique sur l. Erythroxylon Coca*, 1868) states that the thoughts are not mixed up as in alcoholic intoxication. The phantasms are brilliant; there is a flow of wit. I have seen in an advanced case of general paresis a similar delirium—a desire to sing and recite, to move about, to express a feeling of happiness. An habitue of cocaine has expressed himself as desiring rather ten years with cocaine than 10,000 centuries without it. The element of grandeur and personal aggrandizement sometimes enters.

Dujardin-Beaumetz, in his *Dictionaire de Therapeutique Supplement*, 1895, states that the effects of cocaine in toxic doses in warm-blooded animals are similar to strychnine, but in *cold*-blood animals—the frog, for instance—no convulsions are produced.

It is a curare for the sensitive nerves, exciting the nerve trunks, and rendering the peripheral nerves analgesic.

Francois (*Arch. de Physiologie*, 1892, p. 562) finds it a paralyzing poison, not only on the sensitive fibres, but also on the motor and on the fibres of muscles, as well af the protoplasm of cells.

The frequency of pulse is probably due to paralysis of vagus; the phrenic is likewise interfered with, causing the respiratory spasms and tetanic arrest in some cases.

In my case there was no interference with the urine. The urine is often suppressed; other secretions, as those of the mammary and submaxillary gland, have been noted as likewise affected by toxic doses.

Maurel thinks that death is due to destruction of leucocytes. Their dead bodies collecting in capillaries and forming embolic processes.

Reclus holds that thrombi form in veins, and when death occurs after an injection under the skin it is due to the penetration of a small vein.

This will hardly account for the deaths happening after the drug has been thrown into the urethra or when swallowed by the mouth.

As to treatment, I cannot offer anything suggestive. Morphine has been looked upon as antagonistic, and has been given in the majority of cases recorded where symptoms of collapse are present early, with tetanic convulsions and cyanosis. Nitrate of amyl is indicated.

Where heart's action is weak, stimulants, strychnine, hypodermatically, alcohol, ammonia, and ether have all been suggested and tried.

The early administration of $\frac{1}{3}$ grain morphine did probably influence the course in the case described, but recovery is often rapid without any treatment.

As the poison is eliminated rapidly by the urine and skin, the free action of these organs is desirable, especially as there is a tendency for them to be less active than usual.

While the dosage of cocaine cannot be said to have any well-defined limits, several clinicians, among them Hänel and Decker, believe that $\frac{1}{2}$ grain, hypodermatically, should be the maximum dose.

DISCUSSION.

Dr. Thomas J. Mays: I was much pleased to listen to this report of a case of cocaine-poisoning, in fact, I have always been much interested in the toxic effect of cocaine, especially in regard to the question whether cocaine causes convulsions in animals from its influence upon the peripheral or upon the central nervous apparatus. Dujardin Beaumetz says that in the frog cocaine convulsions never occur and that there is a strong analogy between cocaine and curare, one acting upon the sensory and the other upon the motor filaments. In warm-blooded animals all are agreed that convulsions do occur. I think too much stress is laid on the complete absence of convulsions in the frog when poisoned by cocaine, for I have certainly seen general convulsions precede the paralytic stage, although they are of short duration. It has been observed that while small doses of strychnine cause convulsions in frogs, large doses do not—the frog lying on the table just as if he were poisoned by curare or by cocaine. I have performed many experiments in this direction, but found nothing new so far as the action of cocaine is concerned; indeed the more you experiment with cocaine the more confusing its action seems to become. While small doses produce tetanic symptoms, there is, I believe, a case on record in which sixteen grains were said to have been given without any bad results. Cocaine, like strychnine, theine, and curare, arrests the heart in diastole in the frog, while other alkaloids, delphinin for instance, arrest the heart in systole. It is very strange that cocaine should resemble those alkaloids so greatly in some of its effects and yet differ so much in others.

Selected Papers.

TREATMENT OF WOUNDS OF THE FACE.*

By John B. Roberts, M.D.

Contusions of the face are disfiguring from the swelling and discoloration which they cause. The loose subcutaneous tissue of the eyelids especially permits extensive extravasation of blood after contused wounds in the vicinity of the eyes. The puffy swelling disappears in a day or two, but the cutaneous discloration lasts for a week or ten days. The skin over the extravasated blood is at first bluish-black, but gradually becomes greenish and then yellowish, before assuming its normal hue.

A similar discoloration of the forehead may be seen when a wound of the scalp has been received, because the extravasated blood gravitates downward into the tissues of the upper part of the face. Subconjunctival ecchymosis, giving a red discoloration to the white sclerotic region of the eye, occurs in blows received upon the eyeball, in rupture of conjunctival vessels from coughing, vomiting, straining at stool, etc., and in fractures of the orbital plate of the frontal bone and of the other bones which take part in the construction of the orbital cavity.

Pressure and cold compresses, employed for a few hours after a contusion has been received, tend to arrest the subcutaneous bleeding, and thereby diminish the consecutive tumefaction and discoloration. Pressure probably does little good after a couple of hours. The cold applications should be discontinued at the end of eight or ten hours; they are likely to interfere with the process of absorption, upon the activity of which the removal of the blood and inflammatory deposits depend.

In cases characterized by great ecchymosis, numerous minute punctures may be made through which the blood is to be squeezed out of the tissues.

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*Read before the Philadelphia County Medical October 23, 1895.

Perfect asepsis must be maintained if this means is adopted, in order to avoid the occurrence of suppuration and conspicuous scarring. Solutions of ammonium chlorid (gr. v–x f ℥ j), tincture of arnica and similar lotions, used to hasten the absorption of the blood and the return of the skin to its natural color, probably owe their reputation largely to the friction employed in their use. Agnew believed that surgical shock greatly delayed removal of extravasated blood, and advocated in addition to warm and stimulating applications, tonics and ample diet to hasten absorption.

Pugilists at times paint the skin with flesh-colored cosmetics to conceal the black and blue marks due to bruises.

Incised and lacerated wounds must be rendered aseptic by thorough cleansing with soap and water followed by the application of antiseptic solutions Anesthesia will often be required to enable the surgeon to do his full duty in this respect. The scrubbing-brush must be vigorously used to remove all dirt and septic particles from the raw surfaces. Mercuric chlorid solution of the strength of 1 to 500 or 1 to 1000 is then freely used as a sterilizing wash.

Tissues seemingly devitalized should not be hastily cut away, for the free blood-supply of the face enables its structures to sustain much damage without the induction of gangrene. Heat applied by means of affusions of hot sterilized salt solution or hot antiseptic washes will aid in revivifying damaged skin. The temperature of the lotions should be about 105° F.

The approximation of the wound should be made by sutures employed so as to cause as little scarring as possible. The dressings should be antiseptic and such as will hasten union. Primary union is desired. When sterilization and neat coaptation are evidently impossible, because of the character of the wounds and their multiplicity, very frequent antiseptic irrigation of the surface of the face will wash away discharge and prevent septic accumulations. A saturated boric acid solution or a weak mercuric chlorid lotion (1 3000–5000) is satisfactory. They should be used about every two hours.

When actual loss of skin has occurred and the gap cannot be covered by sliding or transferring flaps, immediate skin grafting by shavings cut from the thigh or arm may be adopted. It is necessary for success that the raw surface be thoroughly sterilized, and bathed with hot and sterile normal salt solution. The skin shavings cut from the thigh with a razor are laid while warm over the denuded surface, in such a manner that their edges over-lap. A piece of sterile oiled silk or rubber tissue is laid upon them and a dry gauze dressing applied. I usually cut a few slits in the protective material so that any serum oozing from the wound may find opportunity to escape to the over-lying dry gauze. This keeps the wound surface from being macerated by fluid retained under the protective.

The edges of wounds of the nasal, auricular or tarsal cartilages should be brought together by fine sutures, which may be carried through the cartilage will give sufficient hold for the stitch.

Local emphysema of the cellular tissue of the face may occur when the lachrymal sac is ruptured, or the frontal or maxillary sinus or ethmoid cells opened by fracture. When the air escapes only into the loose tissue of the orbit, protrusion of the eyeball and crepitation, felt on palpation of the ocular region, occur. The deformity from the swelling due to air in the connective tissue needs no treatment. Subcutaneous rupture of the duct of the parotid gland has been caused by blows on the cheek. The saliva may then burrow into the tissues of the face and neck, causing an emphysematous swelling and much deformity. Pressure will probably be the only treatment required in such injuries.

Gunshot wounds often induce great facial deformity, because considerable areas of tissue are carried away by the missile. Much permanent disfigurement may result from displacement of the bones, actual loss of tissue, or cicatricial contraction in these and other injuries. The distortion due to bony lesions must be prevented as far as possible, by actual replacement of fragments. A great amount of power may be required to pry up depressed fragments or alter the relation of bones driven together by the vulnerating force.

The side of the face is greatly deformed by depressed fracture of the zygomatic arch. The depressed portion should be elevated with a lever, introduced through an incision made parallel to the margin of the zygoma.

In extensive osseous injuries, the bones should be accurately adjusted and held in position by chromicized catgut sutures introduced through drill holes. Sterilized bone or ivory pegs may be employed to nail the bony structures together, if sutures are not effective. The pegs will be absorbed if the wound remains aseptic. Teeth knocked out should be washed with an antiseptic solution and replaced in the socket previously sterilized. The adjoining teeth may be utilized as a sort of splint to which the loose teeth may be tied or wired. Keeping the mouth bandaged shut as in fracture of the lower jaw will aid in maintaining immobility until the replanted tooth becomes firm in its bed. This requires a week or two. If teeth are broken off, the pieces should be preserved so that a dentist may replace the crown on its root by pivoting.

Bullet wounds of the face should seldom be probed. Little information is gained with the probe that cannot be obtained without it. Such wounds are usually sterile and the surgeon's object is to obtain prompt union by organization of the moist sterile blood clot within the bullet track. Exploration with the probe is likely to interfere with this method of healing. Extraction of the ball through the opening of entrance is very unlikely to be possible of accomplishment. Most bullets buried in the face are not found. Unless the situation of the buried missile is apparent, it is better surgery to gain primary antiseptic occlusion of the wound with a gauze pad or a guaze and collodion dressing. A minimum deformity from scar is obtained if union occurs without suppuration. Any indication of redness, swelling or pain, pointing to sepsis. Should be met by immediate opening of the wound. It should then be syringed out thoroughly with hydrogen dioxid solution, followed by mercuric chlorid solution, and dressed in a manner to favor drainage of fluids.

Punctured wounds should be managed by similar occlusive dressings, if made with clean and smooth instruments probably sterile. If the vulnerating instrument was manifestly septic, or if the wound at a later time shows signs of infction, it should be widely opened and sterilized as in those parts of the body where scarring is not objectionable. A properly planned incision will cause less disfigurement than the cicatricial distortion consequent upon a neglected septic wound.

The unburnt powder, imbedded in the skin and subcutaneous tissue by injuries from firearms at close range, leaves permanent blue stains like the blue discolorations obtained in tattooing with black pigments. Coal miners and those injured by pieces of coal often present similar disfigurements. After such injuries the powder or coal dust must immediately be thoroughly removed from the tissues by vigorous scrubbing of the lacerated or burnt surface with soap and hot water and a brush. Anesthesia is usually necessary. Attempts to remove the dust-like particles with forceps will seldom be successful.

When the skin has healed over the imbedded carbon, the discoloration can only be removed by excising the stained area or tediously removing each minute particle. A small circular punch, shaped like the end of a watch key, may be applied over each blue point, or croton oil may be picked into the discolored skin with a needle. In the later case suppuration will probably occur and cause extrusion of the carbon. The minute white scars will be less disfiguring in a white patient than the tattooed marks. I was once asked to remove from the forehead of a Hindu woman the tattooed mark of her caste. I feared that the white scars left by either of these methods would be conspicuous on the smooth brown skin. I told the patient that I would make experimental trial of the various chemic and operative methods for this purpose on her arm before attacking the exposed surface of her face. She, however, did not return for treatment.

The combustive destructon of the imbedded carbon by introducing a red-hot galvano-caustic needle has been proposed for removing blue tattoo marks. I do not know what effect this method would have on mineral pigments, but it seems plausible in cases of powder stains.

Dermatologists employ chemic means to remove intentional tattooing, but the discolorations due to accidental wounds from firearms or coal-mining injuries are probably too deep for the successful application of chemical solvents. Ohmann-Dumesnil says that he has removed the pigmentation in tattooing by pricking glycerole of papain deeply into the skin. He thinks that the digestive principle of the papain is disseminated about the pigment particles and liberates them from the enveloping tissue; and that the finely divided carbon or metallic pigment is then partly extruded from the surface.

Another method is called Variot's plan. In this a concentrated solution of tannin is pricked or tattooed into the deep layers of the skin at the spot where the discoloration is situated. A stick of silver nitrate is then firmly rubbed into the punctured area. The skin is not wiped off until the little wounds, made by the tattooing needles of the surgeon, show as black points, because of the formation of silver tannate. Inflammation occurs, scabs form and on the removal of the scabs in a couple of weeks the pigmentary stain is gone. A red scar remains for a considerable length of time.

Society Reports.

ROWAN COUNTY MEDICAL SOCIETY.

Meeting Held at Salisbury, October 7, 1895.

President Darrett in the chair. Dr. W. W. McKinzie read an interesting paper on

ANTITOXIN.

Among other things he said: "It is now known that two grand results can be achieved by it: First—Immunity. Second—Curative or healing where the disease already exists. When serum is thrown into the tissues (this is vague, but perhaps tissue will answer) or, better still, into the circulation it neutralizes the poison produced by bacteria, accomplishing this by reason of certain substances which are formed. These substances can be separated and may be found in the blood, also in the milk.

It was therefore at once thought proper not only to use the blood or its serum, but also the milk, for the purpose of producing immunity. This production of immunity could even be demonstrated in test tubes by mixing certain quantities of bacterial poison or products with serum and finding the poison neutralized.

The immunity produced by antitoxin injections takes place immediately after the injections. By increasing the quantity of serum, we can prevent an infection in a severe epidemic. The immunity is not accompanied by any reaction nor by any pathological symptoms. The period of duration is relatively short; the positive time has not yet been demonstrated. Sometimes five cubic centimetres is sufficient to effect a cure. Dr. Aronson has given 50 c.

c. at one time and repeated on the following day. In very violent cases it is necessary to begin with 10 c. c."

Dr. Shimpoch reported a case of phlegminous erysipelas of leg necessitating amputation at the thigh. He was called in consultation with a young doctor who had treated the case for twenty-one days for a spider bite. The cellulitis was so profound and the leg had been so badly mutilated with the knife that the only alternative left was amputation of the thigh, which they did with recovery.

Dr. Shimpoch asked best treatment for enlarged prostate.

Dr. Poole. I would advise the use of fld. ext. saw palmetto with pichi. It has been of great benefit in my hands.

Dr. Whitehead. I would recommend the use of salix ger. If you have not used it, try it.

Dr. Whitehead introduced the subject of nucleine.

Dr. Jones. I have used protonucleine with favorable results. It has been of vast benefit in the treatment of tuberculosis in my own family.

Dr. McKenzie. I have used nucleine in several cases with benefit.

Dr. Gaither. I can report favorably of the use of nucleine so far as I have tried it.

Dr. Jones. In tuberculosis we may search for this or that curative agent, but, Mr. President, I maintain now, as I have all my life, that the only true method of arresting and curing the disease is by neutralization. Sterilize the soil and you arrest the disease.

The subject of the cold bath in typhoid fever was introduced by Dr. Crowell.

Dr. McKenzie. I have not long since returned from the hospital in New York. There you open the door for a suit for malpractice if you do not use the bath.

Dr. Poole. I use the bath when necessary, but in many cases it is not necessary. I regard the bath as I do whiskey and quinine. When there is any malaria in the case I use quinine and when necessary I use whiskey, but in the last few weeks I have treated five cases and I have used neither quinine, whiskey nor the bath and they are all convalescing nicely. Do not understand me as opposing the bath for I have seen many favorable results from its use.

Dr. Crowell. Perhaps I have been more venturesome with the bath than many others, but my results have been good. I have even used the tub with a lady during menstruation. Also with a boy immediately after a severe hemorrhage. Both recovered.

NORTH CAROLINA MEDICAL JOURNAL.

ROBERT D. JEWETT, M.D., EDITOR.

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Editorial.

The Prevention of Tuberculosir.

The relation borne to the spread of tuberculosis by the domestic animals and especially milk and beef cattle, is so well established that it has led to legislative enactment in several States. Not only does the germ lurk in the juicy steak and the savory roast, but even the milk affords him a vehicle, in which to find his way into the human economy. And it has been clearly demonstrated that the germs may be found in the milk, when it is quite certain that it was not contaminated after leaving the udder. Of course these germs may be, and countless myraids of them doubtless are, taken into the stomachs of men, women and children without doing harm; but it is, nevertheless, one avenue through which man becomes infected, and if possible should be removed. The old methods of determining the presence of tuberculosis in cattle was too uncertain to be of great value, probably more erroneous than correct diagnoses being arrived at. Tuberculin, however, seems to give more certain results, and to have stood the test of time in this particular sphere of usefulness, and it is the accepted test for tuberculosis in cattle at this time among veterinarians. But it is by no means infallible and its failure to cause reaction in a certain case does not prove positively the absence of the disease. When reaction does occur, however, the probability of the presence of the disease is so great that the animal should be destroyed. Large numbers of cattle have been destroyed as a result of this test, and as the cattle most subject to the disease are the thorough breeds, such as Jerseys-Guernseys, their market value was very high. Especially in the vicinity of the larger cities do the cattle seem to be affected, and near New York whole herds of valuable stock have been sacrificed by their owners, rather than run the risk of carrying the disease to a human being.

Very little interest in this matter has been shown in the South, but we are pleased to see that the State Agricultural Experiment Station has taken hold of the matter. It has published a Bulletin, devoted entirely to this subject, and as it will fall into the hands of non-professional folk very largely, it will, we trust, do much good in educating the people in regard to the contagiousness and preventability of tuberculosis. The tuberculin test has been made on the herd of cattle at the Station, and as a result, a very fine bull was sacrificed.

Large numbers of cattle are annually slaughtered for the markets of the larger towns of the State, and we believe that in not one of them is any municipal inspection ever made of the cattle ante or post mortem. The Experiment Station is moving in the right direction and has set an example that should be followed. Towns should have ordinances restricting the selling of fresh meats to regularly licensed butchers, at established market houses, and providing for one or more abattoirs, where, alone, cattle may be slaughtered. These abattoirs should be under the control of the municipal government, and be inspected weekly or oftener as the case might require. The cattle brought for slaughter should have applied the tuberculin test, and should not be admitted to the pens provided for healthy animals unless they fail to react to the tuberculin.

But while the prevention of tuberculosis among cattle supplying food for men would eliminate one source of contagion, by far the most fruitful source would still remain. Man himself is man's worst enemy as far as the spread of tuberculosis is concerned. The beef from a perfectly healthy animal may be hung in a market-place and still, if the butcher is a victim of tuberculosis, the beef may become infected. If tubercular patients frequent the market and expectorate the germs upon the floor to become dry and wafted through the air, the beef is more than likely to become infected. It is those susceptible persons who are daily associated with others afflicted with the disease among whom the greatest number of cases occur. Isolate those who have the disease, or devise some way in which all the germs which emanate from them will be destroyed and the other sources of contagion will, in our opinion, be found to bear but a small proportion of the responsibility for the great prevalence of the disease. Tuberculosis, which Dr. Battle, of the State Board of Health, estimates destroys some 4,000 of the inhabitants of our State each year must be placed in the same category with other contagious and infectious diseases, and be under the control of the Health authorities, and subject to the laws of quarantine and disinfection, if much is to be accomplished in the way of restricting its ravages. In other words, the bacillus tuberculosis must not be allowed to be at liberty, or he will surely find a victim.

How far isolation should be carried is a delicate question, for the disease is long continued, and it would be a great hardship on the unfortunate sufferers to be shut out from friends and the pleasures of life until death or recovery removed the danger to their fellow men. In fact, we hardly believe that the public would submit to it, even when they recognized that it was for their own protection. One thing can be done, however, which would effect a certain degree of isolation, and offer to the sufferers all the chance possible for their recovery. Many of these cases go on from bad to worse, and become more and more dangerous as sources of contagion, to finally die, when they might have been cured and saved to their friends and the State by proper treatment at the proper time. Sanitaria could be established by the State in different sections which might be proven to offer the best climatic conditions, and placed under efficient management. Few persons, knowing that they had contracted the disease, would hesitate to place themselves in one of these institutions, and while it would result in the cure of many who, under the conditions that now exist would die, a tremendous source of infection would be removed from the community at large.

Abstracts.

ON THE CLINICAL VALUE OF EHRLICH'S "DIAZO"-REACTION. (*Ettles Medical Times and Hospital Gazette.*) After an examination of two hundred and forty-three specimens of urine, the author concludes that it is found in the urine of a certain number of apparently healthy individuals, two out of eighty-five cases. It is found invariably in typhoid fever and pneumonia. It is found very frequently in pleurisy, twelve out of thirteen cases; in measles, eight out of sixteen cases; and in intestinal obstruction, one out of two cases. It is found frequently in peritonitis, two out of five cases; in suppurative inflammation, four out of sixteen cases; in erysipelas, three out of seven cases; and in phthisis, five out of twenty-one cases. It is occasionally found in rachitis, three out of fourteen cases, and in diabetes mellitus, two out of seventeen cases. It seems to be absent in malignant and chronic, non-tuberculous, visceral lesions. When taken in connection with other symptoms it has a diagnostic importance. Its presence would turn the balance of opinion in favor of a case being measles instead of rötheln. Where we are suspicious of typhoid fever its presence would still further incline us to that view, and it would help differentiate tuberculous phthisis from other chronic, pulmonary diseases. These results agree with Nissen's deductions.—*Intern'l Med. Mag.*

Successful Removal of a Large Tumor from the Spinal Canal.—(*Kümmell Beiträge zum Centralblatt für Chirurgie.*) The author relates an interesting case in which a tumor was diagnosed and removed from the spinal canal of a patient, aged forty-seven, with almost entire recovery and relief from pain. The patient had complained, in 1889, of weakness and pain in the limbs which kept gradually increasing, and which resisted all treatment. In May, 1893, a tumor was discovered on the inner surface of the rectum and successfully removed, the patient recovering entirely. This tumor was found to be a sarcoma. The following year the patient again had gradually inincreasing pain and weakness in the lower extremities, with localized pain beneath the shoulder-blades, followed by a paralysis. On the 6th of November of that year the patient was unable to move at all. The area of anæsthesia extended to the third thoracic vertebra on the left side and to the seventh on the right, with an area of hyperæsthesia extending above. The situation of these areas and the history of their development, together with the history of previous malignant growth, made the diagnosis of a tumor in the spinal canal at about the third thoracic vertebra on the left side nearly certain, although there were no external evidences of its presence. The patient's condition made operation necessary, and an incision over the third, fourth and fifth vertebræ disclosed an external roughening as an evidence of the presence of disease. The removal of the spinous processes and arches disclosed a crumbling, bleeding tumor within the canal, but not a part of the spinal cord, although the latter was compressed to a marked extent, in sharp contrast to the normal size above and below the tumor. The compressed portion was dark red and markedly cyanotic. The tumor had no connection with the dura, from which it was easily separated, although a portion of the vertebræ had undergone pressure necrosis. The operation of removal of the tumor and cleansing of the wound occupied a little over half an hour. It is of interest to note the change that took place in the compressed portion of the cord during the short time it was under observation; it rapidly regained its normal size, lost the bluish rose-color, and differed only from the normal part of the cord above and below by the inflammatory color remaining in it. The patient sustained the operation well; the pain in the wound was very slight, and the day following the operation reflex convulsions manifested themselves in the lower extremities. There was, however, no marked decrease in the paralytic symptoms for the next fourteen days, although there was a gradual increase in the severity of the convulsions. The great toes of the right and then the left foot were moved on the sixteenth day after the operation, and the other toes on the succeeding days. A week then elapsed, when the patient moved first the right and then the left foot; other groups of muscles gradually regained their power, until, a month and a half after operation, the patient could raise his legs up from the bed. Sensibility improved gradually with the return of motion, and two months after operation the patient could stand, and later acquired the use of his limbs, so that he could walk for a length of time and climb up and down stairs with the aid of a cane. The only remaining effects of the paralysis are incontinuence of urine and difficulty in defecation. The tumor was found to be a sarcoma about the size of an apple. The prognosis for the future of the patient is, therefore, unfavorable so far as return of the disease in some other situation is concerned; but the relief of the symptoms and paralysis make the operation justifiable and of great value to the patient.

THE BEEF TEA DELUSION.—Among the most important achievements of modern physiological chemistry is the reputation of the old theory that beef extracts, beef tea and animal broths are possessed of marked nutritive value. The late Dr. Austin Flint remarked on one occasion that thousands of patients have been starved to death while being fed on these preparations. In an editorial article in Modern Medicine the writer expresses the opinion that no greater mistake could be made than to undertake to nourish a patient upon animal extracts, and fortifies his position by citations from Bunge's Physiological and Pathological Chemistry which is regarded as one of our latest and most reliable authorities. According to this work bouillon contains much less than 1 per cent. gelatine—the only article of food which meat yields to boiling water. On the other hand, on preparing meat extracts the quantity of gelatine is reduced as much as possible, because it is in a high degree liable to putrifactive changes. The other constituents of bouillon are products of the oxidations and decompositions which take place in the animal organism. They cannot be regarded as nutritious, because they are no longer capable of yielding any kinetic energy or at most only such a small quantity that it is of no importance whatever. This applies especially to the creatin and creatinin, which, until the most recent times were considered as the source of energy in muscle. It has been demonstrated, however, that these sübstances are excreted unchanged in the urine, and being neither oxidized nor decomposed they cannot form a source of energy. Human muscle could hardly be influenced by the minute quantity of creatin contained in an ordinary plateful of soup. To conform with the latest teachings of physiological chemistry as set forth in the above citations a meat preparation should therefore consist essentially of the albuminous constituents of meat in a concentrated form, and so prepared as to be readily assimilated. It has been found that these conditions are best realized in a food oroduct composed of albumoses, from which the peptones have been eliminated as completely as possible. Such a prepartion is Somatose which has been shown by accurate comparative tests to contain the highest percentage of albuminous matter of all the food products in the market. Somatose is readily digested and completely assimilated and rapidly makes good the waste of tissues in disease producing a marked gain in flesh and strength. Its solubility in all ordinary fluids, tastelessness and odorlessness as well as its freedom from irritating effects on the gastro-intestinal tract are advantages not to be underestimated, especially in the alimentation of capricious invalids and children.

ON THE RELATIONSHIP BETWEEN AUTO-INTOXICATION AND NEURASTHENIA.—Dr. Alvis Pick (*Wiener klinische Rundschau*,) quotes Baumann's discovery of the presence of certain aromatic bodies (indol, scatol, paracresol, phenol, etc.) in the urine of man and some animals, and discusses at length their mode of production in the body. Indol, which he takes as a type, is found in such conditions as intestinal obstruction, atony, paralysis, etc. It is eliminated partly in the fæces and partly in the urine. These bodies act as poisons in the hlood and produce auto-intoxication. The manner in which auto-intoxication is modified or prevented is next discussed, stress being laid on the anti-putrefactive properties of the HCl in the gastric juice. The biliary and pancreatic juices also have a preventive property, so also have the fatty acids, resulting from splitting up of the carbohydrates. If these national safeguards fail, blood poisoning results. Uræmia is possibly a form of autoxication. Possibly this may result from an excess of normal urinary constituents, but Van Noordeen states that uræmic poisons do not exist in the normal constituents, "but that, primarily from reaction upon the tissue in retention, opportunity is given for the production of poisonous substances from natural metabolic products."

The author next discusses the *modus operandi* of certain articles of food (shell-fish, strawberries, etc.) on some persons as poisons. There is reflex action, but this is the path of morbid action, not its cause. There must be (1) individual predisposition; (2) poison introduced into the blood from (*a*) improper ingesta (decomposing sausage, fish, etc.), or (*b*) it may originate in the intestine from the combined action of putrefaction and certain micro-organisms. Similar symptoms may arise from such drugs as antipyrin, iodoform, etc. In these cases the skin is often affected (erythema, urticaria, etc.), but other organs are also affected. Hence, some cases of pernicious anæmia, originating in gastrectasy, may be cured by lavage of the stomach.

Auto-intoxication produces marked nervous phenomena, which may be classified thus:—1. Giddiness; sometimes a true vertigo *a stomacho læso.* 2. Headache; this is common in habitual constipation with urine loaded with indican. 3. Heaviness and sense of pressure on head. 4. Cerebral vomiting due to poisoning of the medulla. 5. Convulsions. The author had a patient who had convulsions soon after meals, and was cured by antifermentative treatment. 6. Psychical disturbances. Delirium with normal pulse and temperature. Insanity is often associated with obstipation, and is relieved when this is cured. Irritable temper and hypochondriasis are other symptoms. 7. Peripheral nervous symptoms—such as tremor. There may be all the symptoms of Basedow's disease, and the author believes that this affection may sometimes originate in auto-intoxication. These symptoms, which may arise singly, in association, or one after the other, afford a picture of true neurasthenia originate in auto-intoxication. These symptoms, which may arise singly, in association, or one after the other, afford a picture of true neurasthenia, and Pick believes that many, though not all, cases of neurasthenia originate in auto-intoxication.

The author refers to the most frequently alleged causes of auto-intoxication—*e.g.* over-fatigue, sexual excesses, mental anxiety, etc.; and adds that the disease is more common among indigent than among energetic persons.

He next discusses the pathogeny of auto-intoxication, and says that in medicine it plays a similar *rôle* to wound-infection in surgery.

In the third article treatment is discussed. Diet is of most importance. Food rich in albumen and carbohydrates should be given, and milk is very useful. Generally a mixed diet of eggs, flesh, milk, vegetables, and farinaceous food is to be recommended. Therapeutics are directed by etiological considerations. Sluggish gastric movements should be stimulated by massage, electrical abdominal sponging, douching, etc. Internal antisepsis should be aimed at, and calomel (gr. ss ter die) is useful in this way. The intestinal tract must be kept clear by purgatives, lavage, massage, etc. Antifermentatives, such as creosote, menthol, guaiacol, etc., are advisable.

MILK BATHS AS A REMEDY.—Since it has become known that milk in a bucket sitting in a sick room will absorb germs, a recent writer (*Medical Press and Circular*) has applied the idea in the treatment of small-pox, fevers, diphtheria, etc., with marked success. The patient is laid on a mattress covered with blankets. He is then packed in a sheet saturated with milk, covering the entire body, in which condition he remains an hour. A warm water bath is then given, after which the surface is dried and the patient is put to bed.

HONEY IN ERYSIPELAS.—Dr. Hayward, of Coopsey, Ill., (*Medical Record*), calls attention to honey as a remedy for erysipelas. It is used locally by spreading on a suitable cloth and applying to the parts. The application is renewed every three or four hours. All cases in which the remedy has been employed entire relief from the pain followed immediately, and convalescence was brought about in three or four days.

Correspondence.

SOME FACTS CONCERNING THE MEDICAL PROFESSION OF NORTH CAROLINA.

To the Editor:

In the beginning of this letter I want it understood that I am making no war against the Medical Profession of the State which composes the State Medical Society, but want to point out a few obstacles, as I see it, that are a great draw-back to the medical profession of the State as well as the people of the State; and I think the power lies within the Society to remedy these evils. The Board of Medical Examiners is very strict on the young graduate of the present day, and I think should be, but that very worthy body seems to overlook the following evils we have to contend with which I think are a great injustice to regular graduates as well as to the people of the State. The first and most worthless of all is the "*Patent Medicine Quacks.*" I have often wondered why such men were allowed to go at large and cheat and defraud the people as they do with their worthless drugs, without any restrictions whatever. One of these "cure all" gentlemen recently came under my observation in an adjoining county, with his kerosene oil liniment, and a few negroes to attract attention with their fiddles, banjos etc., and took out of the peoples' pockets several thousand dollars in actual cash. No doubt some of these people, who patronized this man, are owing their faithful family physician this very day. Is not this an imposition upon the true profession of the State and the people also? What is the remedy? The enactment of laws by the Legislature to prohibit such, through and by the efforts of the Medical Society as a body, which I am sure will represent the true sentiments of the medical profession as a whole throughout the State.

I don't suppose there is a physician in the State who does not come in contact with the "*old midwife*" with her ignorance and superstitions. What do you suppose she knows about human anatomy? How do you suppose she would treat a transverse or shoulder presentation? How do you suppose she would treat eclampsia or hemorrhage? Does any one believe she can treat or attend an obstetrical case intelligently? *Common sense* teaches us that she can not, then why is it that such characters are allowed to take the life of a poor pregnant woman in their hands when they have not complied with the laws of our State in any way, regarding medicine, and the practice of same? Does it look fair or is it fair to compel regular physicians who hold diplomas as graduates in medicine and who have made all subjects pertaining to medicine a study, to comply with the law in the strictest sense, and allow uneducated midwives to go on with their ignorant practice without any restrictions whatever?

I think all persons who prescribe or practice medicine in any way should be made to comply with the law requiring an examination testing their proficiency in the responsible position in life they have chosen. If ignorant midwives, frauds and quacks are allowed to impose on suffering humanity, I don't see any justice in imposing an examination upon educated physicians.

I can see no protection at all for the fair sex of our State under the present existing laws. A committee representing the profession of the State can bring about the proper restrictions through our next Legislature with little effort.

I also observe we have some druggists who are trying to act the physician by prescribing for every possible case with which they come in contact. I think this is not only unlawful but a gross injustice to their neighbor physicians by depriving them of their prescribing fee. This also has a tendency to cause the people to lose confidence in the medical men of our country by having such men to prescribe when they are not capable of making a correct diagnosis ot the case, and consequently are not capable of prescribing. I've had cases to present themselves to me for treatment after being very much abused with druggist's prescriptions, with the complaint that they had almost lost confidence in doctors, being under treatment without any relief. When inquiry is made we find some drug man has been treating them with some patent medicine or other worthless prescription that bears a *large profit*. No wonder the people lose confidence in "doctors' medicine" when it is not intelligently prescribed. This is not only an injustice to the physician, but an imposition on the people. I have reference only to druggists who are not graduated physicians.

The medical profession of this State are very much imposed upon by a class of people who are able to pay their bills and are too dishonest to do so and there seems to be no law to help us get at such a class. They are not worth their homestead and a judgment against their property is worthless unless they are worth over $1,500, except to be placed on record at our expense, to remain as long as the party wishes to put it off. I think the following a good illustration of the present situation. Let a physician employ any one to work for him for a specified time, and if the employer does not promptly pay him his wages the employee can lien the property of employer and collect his money, it makes no difference what the employer is worth, so he is worth the debt. On the other hand let some one emply a physician to practice in his family and this employer not be worth over $1,500, it will be a long time before this physician can get his money if the employer is not honest enough to pay his bill of his own accord. Is not the physician's practice his work? Is it not his labor? Certainly it is, then why can't we have a law to help us get our money from such a class as already mentioned? I think we should have the right to lien property whenever we deem it proper and right to do so just as much as any class of men and until the physician can have such a law to help him in obtaining his compensation from above mentioned class he cannot reach these dishonest people who are imposing on the physicians all over our land. Some one will say he is not a charitable physician; but

I have not forgotten the poor and helpless, and every physician should respond to the calls of such as promptly as to the calls of people of wealth. I do not refer to objects of charity when I appeal for protection against dishonesty and rascality. I think the physician should be the judge as to when charity should be bestowed as he certainly is placed in the closest contact and can become the most familiar with his patients' circumstances of all people, consequently he has every opportunity and means to discriminate between the two classes. Can we hope for anything better than the present existence of affairs? Not until we present our claims boldly and squarely to the Legislative body of our State, for no one will represent our interests as we can ourselves. I hope this matter will not be neglected or overlooked by the medical fraternity of the State when the Legislature meets again. I am for charity, unity, fraternity and protection in the right. Protection for ourselves and the people.

B. T. BITTING, M.D.,
Mizpah, N. C.

Miscellaneous Items.

Under this head space will be given (free of cost) to those paid-up subscribers who desire to change their location, or to dispose of practice or property. One insertion will be allowed, but inquiries must not be ordered addressed to this office.

Any news connected with professional men and matters in North and South Carolina will be appreciated by the Editor.

SECOND HEALTH CONFERENCE.—The second Conference of the State Board of Health was held in the city of Washington, N. C., on the 6th of the present month.

The Conference convened at 10 a. m., in the city hall, and was called to order and its object explained by Dr. Richard H. Lewis, the Secretary of the Board. Dr. John C. Rodman, ex-Mayor of Washington, was elected to preside over the Conference. An address of welcome on behalf of the city was made by Mayor Havens, and by Rev. C. M. Payne, M.D., on behalf of the people.

The sessions were largely attended by the people of Washington and the neighboring country, who manifested a very encouraging interest in the proceedings. The attendance at the evening session was so great that many were turned away on account of lack of room. There were numerous papers presented on topics of interest to the people, and they elicited considerable and instructive discussion. Among the especially valuable papers were those by Dr. John C. Rodman, on Preventive Medicine; by Dr. Julian M. Baker, on Malarial Diseases in Eastern North Carolina; by Mr. John C. Chase, C.E., on Sanitary Drainage and Disposal of Household Wastes; and by Professor F. P. Venable, on Impurities in Drinking Water.

As at the last Conference, held in Salisbury, the "question-box" proved quite a popular and instructive feature at this meeting. Many who were unwilling to "speak out in meeting" asked for and received information on every day matters, which while quite familiar to physicians, are not well understood by the people generally.

It is a great satisfaction to know that these meetings are proving so great a success in attracting the attention of the people, and it is to be hoped that the State Board will continue them with even greater frequency. Three times a year would not be too often for them.

In the afternoon the visitors were given a carriage ride about the city by the Mayor and the local physicians, which was greatly enjoyed. Numerous places of interest were visited and the guests departed for home highly pleased with the especial courtesy that had been shown them by the good people of Washington.

A correspondent writing from a town of some 2,000 inhabitants on the Carolina Central Railroad, says: "The town is suffering from a curious and rare epidemic which is worthy the attention of the State Board of Health, as it threatens to mar the peace of many families, and so far nothing has been found to check its inroads, and that is a violent irruption of *twins* of all sizes, sexes and colors. There are no less than seventeen pair here now and I will report again later. Sometimes they appear as boys, the first in the family; sometimes two girls announce themselves as numbers seven and eight; sometimes a boy and a girl greet an old bachelor who has married late in life, and is rather upset at the advent of one and utterly put to confusion by two; sometimes two boys follow close on the heels of a lusty brace of brothers. Much consternation is felt in married circles and great relief is experienced when only one puts in its appearance."

"℞. FOR AHORS." A physician of a Nebraska town sends to the Louisville *Med. Monthly* the following prescription, written by an "old-timer," happily retired.

Send this by this Boy

Tinker of Asfetty	- -	1 ounc.
" Campher	- -	1 ounc.
Cappicom	- -	1 ounc.
Lodman	- -	1 ounc.
Mix		
Anknite	- -	10 c.
Cloroforn	- -	1 ounc.

do not think this is spelt wright but you will know what it is it is for ahors.

dock————M. D.

Old Charity Hospital. The Commissioners of Charities and Correction (New York city) suggest that still another new name be given to Charity Hospital. Not long ago it was changed to City Hospital, and now Island Point Hospital is suggested. There never was any necessity for changing it in the first place, but the Commissioners still believe in unreasonable and radical reforms.—*Med. Record.*

We note that the *Virginia Medical Monthly* will, with the beginning of the next volume, in April 1896, be changed to a semi-monthly and will change its name accordingly. That's right Brother Edwards, follow in the train of the wide-awake journals. The past is proof that your new venture will prove successful.

OFFICIAL LIST OF CHANGES IN THE PUBLIC SERVICE.

THE ARMY.

From October 17th to October 30, 1895.

The leave of absence granted Maj. Charles B. Byrne, surgeon, is extended three months.

Leave of absence for one month, with permission to apply for an extension of two months, is granted First Lieut. James M. Kennedy, Assistant Surgeon Camp Merritt, Montana.

The extension of leave of absence, on surgeon's certificate of disability, granted Capt. James E. Pilcher, Assistant Surgeon, is still further extended two months on account of sickness.

Arthur, *Capt. William H.*, Assistant Surgeon, is granted leave of absence for one month.

Cabell, *Capt. Julian M.*, Assistant Surgeon, ordered to David's Island, N. Y., for duty, in lieu of reporting to the Surgeon General for duty.

Cronkhite, *Maj. Henry M.*, Surgeon, having been found incapacitated for active service is retired to date from September 17, 1895.

Rafferty, *Capt. Ogden*, Assistant Surgeon, is relieved from duty, at Benicia Barracks, California, and ordered to Fort Bliss, Texas, for duty relieving Maj. Clarence Ewen, Surgeon.

Ewen, *Maj. Clarence*, Surgeon, upon being relieved from duty at Fort Bliss, Texas, will proceed to San Francisco, Cal., and report to the president of the Retiring Board for examination.

Promotion—Medical Department.

Corbusier, *Capt. Wm. H.*, Assistant Surgeon, to be Surgeon with the rank of Major, October 17, 1895, Vice Cronkhite, retired from active service.

Retirement—Medical Department.

Cronkhite, *Maj. Henry M.*, Surgeon, October 17, 1895.

MARINE HOSPITAL SERVICE.

For the sixteen days ending October 31st 1895:

Purviance, *George*, Surgeon, granted leave of absence for 25 days, October 23rd 1895.

Young, *Y. B.* Passed Assistant Surgeon, relieved from duty in Laboratory of Burcan, anddirected to rejoin his station at Key West, Fla.

Hutton, *W. H. H.*, Surgeon, granted leave of absence for 20 days October 16, 1895.

Sprague, *E. K.*, Assistant Surgeon, to proceed from Key West, Fla., to Key West Quarantine Station, for temporary duty, October 16, 1895.

Prochazka, *Emil*, Assistant Surgeon, to proceed from Cain, Ill., to Detroit, Mich., for duty October 31, 1895.

Guiteras, *G. M.*, Passed Assistant Surgeon, granted leave of absence for 30 days October 18, 1895.

AMMONOL IN MALARIAL PAROXYSM.

By Cyrus Edson, M.D., New York.

PRESIDENT BOARD OF PHARMACY, CITY OF NEW YORK.

Many writers have called attention to the unfavorable effects of quinia when administered during the paroxysm of malarial fever. The drug then seems to increase the headache and to have a rather bad effect on the general condition of the patient.

It has been effectually demonstrated that the proper time for quinine administration is during the period of intermission or remission, and no one can deny that quinine is a sine qua non in the treatment of malaria when thus used. The treatment of the malarial paroxysm, i.e., the algid and febrile stage of the disease, has not acquired the attention it deserves at the hands of medical men. Usually the patient is packed in heavy blankets and permitted to shake, burn and sweat in succession until the paroxysm wears itself out. Not only is this discomfort unnecessary, but the physician by permitting it loses valuable time and makes subsequent treatment more difficult. Careful, judicious treatment of the paroxysmal stage of malarial fevers will relieve much suffering and very materially aid subsequent treatment.

I propose to outline in detail the treatment of a typical case of intermittent fever, and I will preface my description with the statement that I have followed this treatment in a large number of cases, obtaining such invariable successful results as to lead me to adopt it as a regular routine practice in all cases of malarial fever.

The treatment is commenced during the first chill if possible, by administration of from 5 to 15 grains of ammonol, the dose depending on the age of the patient, a child of ten years being given the minimum dose, and one grain being added for each subsequent year for older persons up to the maximum dose of 15 grains.

The remedy is given in powder form, dry on the tongue, and washed down with a hot toddy of whiskey, rum or gin, sweetened to the taste and not very strong. The amount of the alcoholic liquor should vary from a teaspoonful to two tablespoonfuls in about four or five times the amount of hot water. This quantity should be determined by the age of the patient. The good effect of this dose should be apparent within an hour. The headache disappears as if my magic; in many cases the chill is shortened and the fever and sweat completely aborted. At the expiration of an hour from the time of administration of the first dose, a second dose of the same quantity of ammonol, followed by half the amount of toddy, should be given. Occasionally the second dose my consist of half the quantity of ammonol first given; this if the patient seems so completely relieved as not to require medicine.

My first action after a cessation of the paroxysmal stage is to exhibit a dose of calomel rubbed with soda bi-carb., and the following prescription indicates dosage:

Hydrarg. Chloridi Mite.
Sodæ bi-carb aa. grs. iii. to vj.
M sig. one dose.

In very young children gray powder in dose of three-quarter grains may be best substituted for the calomel. During the stage of intermission I give a dose of six to twelve grains of quinine, preferably in liquid form, i. e., dissolved by aid of sulphuric acid in water, as follows:

℞—Quinia Sulph. gr. xij.
Acid Sulph. dil. qs. ft. sol.
Aquæ, - - ℥ i.

M sig. one dose; to be taken after cessation of fever.

In a majority of cases no secondary chill will occur until the seventh or fourteenth day if no further treatment is given, but to clinch the driven nail, it is necessary to give two or three grains of quinine before meals, followed after eating, three times daily, with Fowler's solution of arsenic, dose, two to six drops, for a week. Ten grains of ammonol should be taken at bed time during this period, and the bowels kept open by the means of a mild saline aperient taken before breakfast in the morning.

The action of ammonol in the malarial types of fever seems peculiarly happy. Its good effect is perhaps largely due to the ammonia it contains. This agent has for a long time been known favorably as a malarial remedy. It unlocks the secretions, stimulates, has a selective action on the liver, and not unlikely is a destroyer of the plasmodium of malaria.

That ammonol is an effective malarial germicide can readily be proved by its action on the disease when given as the sole treatment in cases of it. I find the treatment I have given as most certain, however, and I cannot too highly recommend it.

In cases of remittent fever I follow the same line of treatment, using ammonol during the stage of high fever and quinia during the remission. —*The National Board of Health Magazine.*

Reading Notices.

Vin Mariani and the Dispensary Law.—The Dispensary law in South Carolina has of late been so rigidly enforced that many druggists were afraid to sell even medicinal preparations containg wine as one of the constituent parts. This seriously interfered with the sales of the well-known tonic Vin Mariani throughout South Carolina, and the proprietors of that famous specialty made vigorous representations to the Governor on the subject. As a result of these representations, Vin Mariani has been specially exempted from the workings of the Dispensary law, as is shown by the following letter received by Messrs. Mariani & Co. from Governor Evans:

(Copy.)

State of South Carolina,
Executive Department,
Office of State Board of Control.
Columbia, S. C., Oct. 5, 1895.

Mariani & Co., 52 West Fifteenth Street, New York:

Dear Sirs—In reply to your favor of 30th ult., Governor Evans directs me to say that you have his permission to sell the Vin Mariani, and he will exempt it from seizure in the State when not sold as a beverage.

Respectfully,
W. W. HARRIS,
Clerk S. B. C.

In response to numerous requests from physicians for Tongaline in some form more pleasing to the taste and more convenient of administration than the liquid, we now prepare Tongaline in tablets, each 6 grain Tongaline tablet contains:

Concentration of fluid tonga, 1 gr. sodium salicylate, 5 grs., cimicifugin salicylate, $\frac{1}{8}$ gr., pilocarpin salicylate, $\frac{1}{200}$ gr., colchicin salicylate, $\frac{1}{1000}$ gr. All the salicylic acid is made in our own labaratory from the pure oil of wintergreen.

We also make Tongaline and Lithia tablets, tongaline 5 grs., lithium salicylate 1 gr., and tongaline and quinine tablets, tongaline $3\frac{1}{2}$ grs., quinia sulph. $2\frac{1}{2}$ grs.

Samples mailed free to physicians on application.

Mellier Drug Company,
St. Louis.

CHRONIC CYSTITIS WITH STRICTURE.—My experience with sanmetto is quite extensive. I could give special cases in which its action was simply astonishing, but in this report I wish to summarize my experience by saying I have given sanmetto a long and thorough trial in a case of chronic cystitis, accompanied with stricture, the result of which warrants me in saying sanmetto is unsurpassed by any other preparation with which I am acquainted. Its effects are prompt and positive.

RACHAEL J. KEMBALL, M.D.
Buffalo, N. Y.

"Coca" has maintained its reputation as a powerful nerve stimulant, being used with good results in nervous debility, opium and alcohol habit, etc. The highly variable character of commercial drug makes it uncertain however. Robinson's Wine Coca we believe to be a uniformly active article, it being prepared from assayed leaves, the percentage of cocaine being always determined by careful assay.

RHEUMATISM AND ITS SUCCESSFUL TREATMENT.—Rheumatism, under its many forms and guises is one of the most common diseases that the New England doctor has to treat, and while the simpler forms yield readily to the proper medication, the majority are stubborn and resist all efforts of the practitioner to rout it. The following cases successfully treated with tongaline are, I believe, of sufficient interest to warrant their publication.

The first was one of those distressing cases of muscular rheumatism of the subacute variety in a Mr. D., aged 44, American, laborer, who came to me suffering from great pains in the muscles of the arm and shoulder. The pain was such as to incapacitate him from persuing his occupation as a track hand on the New York, New Haven and Hartford Railroad. He commenced using tongaline in teaspoonful doses three times a day and at bed-time. The result was apparent by great improvement in two days and in one week's time the pain had all left him though I continued the administration of the medicine for a week longer in order to make assurance doubly sure. Since his first attack he had one other following a drenching in a rain which occurred about three months after. This treatment brought about the same happy result.

I was called March 3, to see Mr. B., aged 37, Irish, laborer, who I found confined to his bed unable to move for severe pain in the lumber region, affecting all the big muscles of that part.

It was impossible for him to turn over in bed or to help himself in any way. I ordered a bigpiece of flannel to be spread thickly with equal parts of ichthyol and wool-ola and bound over the back tightly, giving two teaspoonfuls of tongaline every three hours night and day. Improvement took place in twelve hours so he could move his body with comparative ease though a good deal of pain still existed. The improvement continued so rapidly that at the end of the third day he was sitting up and the medicine was ordered to be taken in teaspoonful doses three times a day. A week of this completed the cure and at the end of ten days he returned to his work on the streets where he had been employed before being taken ill.—*Dr. W. C. Wile in New England Medical Monthly.*

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THE LOCAL APPLICATION OF COLD IN ACUTE PNEUMONIA.[*]

(SECOND COLLECTIVE REPORT.)

BY THOMAS J. MAYS, A. M., M. D., Philadelphia, Pa.

In the *Medical News*[†] of June 24, 1894, I presented a collection of fifty cases of acute pneumonia which were treated with ice-cold applications to the chest. Since that time, and especially during the early part of the present year, when through the kindness of the medical press I was enabled to extend a general invitation to the profession for reports of pneumonia cases which were similarly treated, I have received 145 additional reports—making a total of 195 cases. To the medical journals which so kindly published my announcement, and to the medical gentlemen who so courteously and generously responded to my appeal, I take pleasure in tendering my warmest thanks, for it is not saying too much that they are rendering vital assistance in a work which will unquestionably serve to rivet the attention of the profession to a most valuable and indispensable measure in the treatment of pneumonia, of which those who have not seen its effects can form no adequate conception. Furthermore, there is no logic more powerful than that which comes from large numbers, and hence I sincerely trust that every medical man who, in addition to that which is recorded here, has had or will have experience with this mode of treatment will send details of same to me for future publication.

Of the 145 cases which are comprised in the present collection only 93 are reported with sufficient detail to enable me to tabulate them; close notes of the remainder were either not taken, or were lost after they had been obtained by the observers. Nearly all the cases bear a record of the sex and age of the patient, the highest temperature and greatest frequency of respiration reached during the attack, the number of days intervening between the chill or the beginning of the disease and the day of crisis, or the subsidence of fever; the presence of absence of delirum, the unilateral or bilateral location of the disease, the result in each case, together with remarks, and the names and address of the reporters.

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[*] Read before the Philadelphia Academy of Surgery.

[†] Ice in the Treatment of Acute Pneumonia.

[‡] Blanks for the report of cases will be furnished by me on application.

Sex. Among the total number the sex is noted in 143 cases, of which 67 are males and 76 females.

Age. The age is given in 143 cases. The number of cases occurring in each decade is as follows: Below one year (three weeks, six and a half months, and eight months, respectively), 3; between one and ten years, 27; ten and twenty, 34; twenty and thirty, 26; thirty and forty, 29; forty and fifty, 16; fifty and sixty, 2; sixty and seventy, 5; seventy and seventy-five, 1.

Highest range of temperature. This is recorded in 126 cases—48 males and 78 females. The highest temperatures attained in these cases were as follows: In two cases it was 100°; in two, 101°; in three, 102°; in five, 102½°; in nineteen, 103°; in ten, 103½°; in thirty-seven, 104°; in ten, 104½°; in twenty-one, 105°; in six, 105½°: in six, 106; in one, 106½°; and in four, 107° F.

The highest average temperature at different age-periods of 125 cases. Below the age of five years there were 14 cases with an average temperature of 104.68°; between five and ten years, 13 cases with an average temperature of 103.84°; between ten and fifteen, 11 cases with an average temperature of 104.36°; between twenty and twenty-five, 8 cases, and an average temperature of 104.50°; between twenty-five and thirty, 17 cases, and an average temperature of 103.55°; between thirty and thirty-five, 8 cases, and an average temperature of 103.68°; between thirty-five and forty, 17 cases, and an average temperature of 104.12°; between forty-five and fifty, 5 cases, and an average temperature of 104.20°; between fifty-five and sixty, 1 case, and a temperature of 104.50°; between sixty and sixty-five, 3 cases, with an average temperature of 104.16°; 1 case between sixty and seventy, and 1 between seventy and seventy-five, with a temperature of 103° and 102°, respectively.

The highest respiratory frequency. This is noted in 55 cases, which may be grouped into the following age-periods: 6 below five years; 3 between five and ten; 6 between ten and fifteen; 10 between fifteen and twenty; 3 between twenty and twenty-five; 9 between twenty-five and thirty; 1 at forty; 8 between thirty-five and forty; 3 between forty and forty-five; 3 between forty-five and fifty; 1 each between fifty-five and sixty, sixty and sixty-five, and seventy and seventy-five.

Days of crisis or subsidence of fever. These are noted in 113 cases, and they occurred as follows: In 8 cases at the end of the first day; in 18 at the end of the second day: in 7 at the end of the third day; in 18 at the end of the fourth day; in 16 at the end of the fifth day; in 13 at the end of the sixth day; in 11 at the end of the seventh day: in 6 at the end of the eighth day; in 9 at the end of the ninth day; in 1 at the end of the tenth day; in 3 at the end of the eleventh day; and in three at the end of the twelfth day.

Number of cases of single and double pneumonia.. There were 108 cases of single and 31 cases of double pneumonia, or nearly four times as many of the former as of the latter. The average highest temperature of the single pneumonia cases was 104.51°, while that of the double cases was 104.62°. The percentage of deaths among the former was 3.70 and among the latter 6.45.

The mortality. Among the 195 cases there were 7 deaths, 4 males and 3 females, or a mortality rate of 3.58 per cent. The oldest of these was was seventy-four and the youngest was sixteen years. Three were double and four were single cases of pneumonia. The highest temperature attained among these cases was 104° and the lowest 102°, or an average of 103$\frac{2}{3}$, there being only an average difference of 0.34° between those who died and those who recovered. The personal history of those who died was as follows:

1. Adult, had a chill ten days before he was seen, and died three days after being admitted. When he came to the hospital he was cyanotic, delirious, and had excessive diarrhœa. His pneumonia was double.

2. Aged thirty-seven years, had diarrhœa and delirium tremens, and his condition was complicated with chronic lead-poisoning. His highest temperature was 102°.

3. Aged twenty-eight years an acute exacerbation of chronic pneumonia.

4. Aged twenty-six years, double pneumonia: was admitted four days after the chill. His temperature was 103 degrees and respiration 45; breathing very labored and painful. Died sixteen hours after admission, of apnœa. Post-mortem examination showed chronic phthisis in both apices, a cavity, with chronic consolidation around it, in left apex. The lower lobes of both lungs were hepatized, and the middle lobe of right side was in a state of congestion.

5. Sixteen years old; admitted four days after chill with double pneumonia, at which time she had an offensive diarrhœa, bloody stools, and hæmoptysis, and was cyanosed and in a stupor. Died on the evening of the second day after admission.

6. Aged seventy-four years. Highest temperature 102 degrees. Died on the eighth day. Ice-bags were applied from the first to the third day.

7. Aged forty years, whole of right lung involved. Highest temperature 104 degrees. Ice applied on first and second days. Died on the eighth day.

Comparison of Results. Whatever opinion we may hold in regard to the value of any treatment, it is quite obvious that in the long run the verdict will favor that one which shows the smallest mortality rate. I am well aware that statistics are often unreliable unless they roll up into large figures, yet I believe that the number of cases which I present for your consideration to-night will form a basis on which to rest an opinion of the treatment here advocated; but before drawing any positive conclusion I will briefly inquire into the results which have been obtained by various other forms of treatment of pneumonia. Dr. Osler reports that out of 1012 cases treated in the Montreal General Hospital 20 per cent. died, and that in the Charity Hospital of New Orleans the morality rate was 20.01 per cent.; of 1000 cases of pneumonia treated in the Massachusetts General Hospital from 1822 to 1889 the death-rate was 25 per cent. Dr. Hartshorne states that the mortality rate from this disease in the Pennsylvania Hospital during the years 1884, 1885, and 1886 was a little more than 31 per cent. Louis treated 107 cases, of which 32, or about 30 per cent., died. Grisolle had a mortality of 16 per cent. in 232 uncomplicated cases. Rasori treated 648 cases of pneumonia with large doses of tartrate of antimony, of which about 22 per cent. died. With the same medicine, Grisolle lost 18.8 per cent. of 154 cases, and Dietl 20.7 per cent. of 106 cases. During a period of sixreen years previous to 1861 Dr. Huss, of Stockholm, treated 2616 cases, with a death-rate of 10.74 per cent. Of 129 cases treated on the restorative plan by Dr. Bennet,, of Edinburgh, only four died, giving a mortality of 3.1 per cent. Dr. Hegele, head physician of the Würzburg Hospital, during 1848 and 1849 treated 40 cases with cold water, without a single death.

Now what conclusions are we to draw from a death-rate which varies all the way from 30 per cent. to nothing? Are we to believe that all pneumonics recover under certain methods of treatment, and that a large proportion of them will necessarily die under others? No one would be justified in making quite such a reckless assertion, yet it must be admitted that the truth lies somewhere between these two extremes. But in order to get at something more tangible, let us first find the rate of natural recovery from this disease. What proportion get well under no treatment whatever, and what proportion die under such circumstances? After having ascertained this we will be in a better position to estimate the worth or worthlessness of any treatment. It is very fortunate that this important link has been furnished. In 1844, '45, and '46 Dr. Dietl, a Viennese physician, treated 189 cases of pneumonia practically without medicine, and with a death-rate of 7.4 per cent. From 1847 to 1850 he treated a second series of 750 cases, with a death-rate of 9.2 per cent. That this represents, at least approximately, the rate of natural recovery from pneumonia is also confirmed by the results of pure homœopathic practice, which may be regarded as equivalent to the let-alone or do-nothing treatment. Thus, out of 94 cases of pneumonia treated in the homœopathic section of Leopoldstadt Hospital in Vienna, 9.57 per cent. died; out of 24 cases of pneumonia treated in the same institution by Drs. Wurmb and Caspar, 12.55 per cent, died; and Dr. Tessier, of Paris, treated 41 cases of pneumonia, homœopathically, with a mortality of 7.3 per cent.

If these figures are reliable, and there is no evidence that they are not, they show that, as a rule, the natural tendency to recovery in pneumonia is about 90 per cent., and that, therefore, any treatment which is not capable of holding the death-rate down to or below 10 per cent. is not only worthless, but actually mischievous. So far as I apprehend this, however, it only applies to an ordinary aggregate of favorable and unfavorable cases of pneumonia, and not to exceptional instances like those which are met in fatal epidemics of pneumonia, or in a large number of successive cases of alcoholic, senile, or latent pneumonia, as may happen in the experience of any medical man with a large public or private practice.

When we come to compare the results of the ice-cold treatment of pneumonia with those which have been obtained from other forms of treatment, it is safe to say that the former are infinitely more satisfactory than the latter. Although Dr. Bennett's figures excel those which are presented in my collection by about one half of one per cent., it must not be forgotten that his results are entirely over-shadowed by Dr. Hegelé's 40 cases, which were treated hydropathically without a single death. Moreover, it must not be overlooked that, so far as my knowledge extends, Dr. Bennett's observations have not been duplicated by anyone on the lines laid down by him; while, on the other hand, this is not the case with the cold treatment; its results in my collection have not been secured by a single individual only, but by as many as thirty-four different observers, among whom are a number who have seen a score of cases, and many more a lesser number in succession, without a single death. This of itself speaks volumes in favor of the method here advocated, for it shows that the personal equation of the practitioner cannot enter very largely into the success of the treatment.

Then, again, I express the hope that these statistics will tend to put to rest the mischievous and irrational dogmatism which regards pneumonia as a self-limited disease, like smallpox and scarlatina, and consequently wholly beyond the control and influence of medicine. Not only is this position refuted by the fact that the death-rate in pneumonia when treated by local cold applications is lower than if the disease is allowed to go untreated, but its unsoundness becomes still more apparent when we learn that the cold treatment hastens the appearance of the day of crisis. This is well shown in the following table, which gives in percentages the days of crisis as they occurred in 373 cases of pneumonia taken from the British *Collective Investigation Record*, and in 113 cases of my own collection:

DAY OF CRISIS.	P. C. OF CASES. BRIT.	MAYS.
1		3.5
2	1	12
3	4	5
4	9	13
5	16	19.5
6	14	12.5
7	22.5	11.5
8	14	9
9	7.5	6
10	5.5	3
11	1.5	3.5
12	1	1.5
13	.5	

These figures bring out some very interesting points which seem to demonstrate the remarkable influence which the cold exerts over the pneumonia process. It will be seen that in the British *Collective Investigation Record* there were no crises at the end of the first day, but that in my collection the crisis took place in 3½ per cent. of the cases at the end of that time. In only 1 per cent. of the cases of the British collection did the crisis occur at the end of the second day, while in my own collection the crisis occurred 12 per cent. of the cases at the end of that time. On the third day the crisis took place in nearly an even number in the two collections. The largest number of crises in the former collection occurred on the fifth and seventh days, while in mine the largest number occurred on the second and fifth days. On the second day the crisis had occurred in only 1 per cent. of the cases of the British collection, while in my own collection it had taken place in 15½ per cent. of the cases. On the fifth day the crisis had occurred in 30 per cent. of the cases of the British collection, while in my own collection it had taken place in 53 per cent. of the cases at the end of that time. In this connection I would say that Jürgensen's collection of 721 cases of pneumonia gives practically the same figures in reference to the occurrence of the days of crisis as that which obtains in the British collective report.

Now if these figures have any value, they indicate that cold *has* a marked and decided influence on the pneumonic process, not only in bringing it to a favorable termination, but to materially shorten its course. This abortive power of the ice has been noticed and spoken of by many of the observers in my collection, and I believe that it demonstrates the great value of the remedy more than anything else.

Mode of death in pneumonia, and its therapeutic indications. Now a few words in regard to the tendency toward death in pneumonia. A high fever, high pulse-rate, frequent and difficult respiration, extensive exudation, etc., are universally regarded as critical and serious symptoms and conditions of this disease. On deeper examination I believe, however, that these are mere superficial manifestations of grave disorder of the nervous system below, and that the gravity and intensity of each attack are universally related to the degree of resistance which is offered by the nervous system against the ingress of the disease. This is corroborated by the common observation that pneumonia is ushered in by intense nervousness, violent headache, active delirium, local muscular spasm, and general convulsions. Lemaire reports a case (*Centralbl. f. Nervenheilkunde*, 1888, vol. ii. p. 680) in which two attacks of pneumonia were preceded each time in the same individual, the first at the age of thirty-two and the second at forty, by genuine epileptic seizure, and this in a person who had not been subject before or afterward to the latter disease. The close affinity between pneumonia and diseases of the nervous system is also shown in the almost constant association of the former affection with cerebro-spinal meningitis, and with other acute diseases of the brain and the upper portion of the spinal cord. That disorder of the nervous system is capable of originating pneumonia is by no means a new doctrine. A few years ago Dr. Hughlings Jackson, in discussing a paper on "Pulmonary Paresis," read by Dr. B. W. Richardson before the London Medical Society, said that he regarded acute pneumonia as a form of herpes zoster of the pneumogastric nerves (*Proceedings London Medical Society*, vol. xi. p. 95). Dr. Fernet, in a paper on "Neuritis of the Pneumogastric Nerves as a Cause of Acute Pneumonia" (*Praktische Heilkunde*, 1879, i. p. 18), expresses the conviction that the socalled fibrinous pneumonia is a herpes of the lungs brought about by disease of the pneumogastric nerves. Professor Baelz, in the course of his lectures in the Tokio University of Japan, teaches that pneumonia is a reflex vasomotor exudation neurosis (*Centralbl f. klin. Med.*, 1888, p. 888). It is thus seen that this line of thought has occupied some of the foremost men in the medical profession.

From this we learn that one of the most threatening dangers in pneumonia comes from a defective supply of nerve force to the lungs. This is indicated not so much by a great frequency of breathing, as it is by a frequent and laborious respiration. The patient who lies there moaning with and struggling for each breath, and who complains of pain and distress in the gastric region—the evidence of an over-worked diaphragm—must always be regarded with the gravest concern. Here the tendency toward death is pulmonary exhaustion—a condition sometimes found without very marked extension of the exudation process or much fever, and most frequently in the aged or in those whose nervous systems are overworked or exhausted by alcoholic excess, etc. Equal to the danger of the above condition is the extension of the disease in the lungs. When this covers a large area, as in double pneumonia, there is marked interference with the function of breathing, and the patient tends to die for the want of sufficient aërating surface.

The next in importance are hyperpyrexia and a weak heart. It is not necessary to say anything about the detrimental effects of high fever in pneumonia. It is also well recognized that, in virtue of its close affiliation with the lungs, a weak and disordered heart is a constant accompaniment of pneumonia.

The therapeutic indications in the management of pneumonia are, therefore, as follows: (1) Suppression and limitation of the process of exudation; (2) Support of the nervous system and particularly of the pulmonary nerve supply; (3) Reduction of fever; and (4) Maintenance of the function of the heart.

Now what part does cold play in filling these indications? It cannot fill them all, but it covers those of greatest importance. First of all it reduces the pyrexia, strengthens the pulse, tones up the heart, diminishes the pain in the chest, alleviates difficulty of breathing, and gives greater general comfort to the patient. It is capable, however, of doing a great deal more. In virtue of its power to stimulate nerve function and to contract small blood-vessels it promotes the pulmonary circulation, relieves stasis, hastens resolution, and disperses the products of exudation. Strychnine in large doses to sustain respiratory and cardiac innervation; concentrated food of the most nourishing character, like fresh beef-juice, milk, brandy, etc., to support the constitution; digitalis to maintain the heart; oxygen by inhalation to relieve the breathing; morphine to produce sleep; ice-cap to the head to diminish restlessness; and strapping of the chest in case of great pleuritic pain, are some of the agents which will fill most of the remaining indications.

DISCUSSION IN SURGERY—DELAYED UNION IN FRACTURES.*

By George A. Peters, M.B., F.R.C.S. Eng.,

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In assigning as the subject of the "Discussion in Surgery" the question of "Delayed Union in Fractures," your Committee on Papers had in view the fact that while rapid and brilliant advances have recently been made in the more attractive fields of abdominal, pelvic, and brain surgery, our knowledge of the repair of injuries in bones, and the best methods of treatment to bring about such repair in a rapid manner and with a satisfactory result, is little in advance of the times of Pott, Liston, and Syme. It can scarcely be that we have reached the ultimate degree of perfection in the treatment of these cases, because we occasionally—though, fortunately, not frequently—see results following fractures which are not satisfactory, either as regards the appearance of the limb, or as regards its utility, and in a few cases we may fail to get any union of the injured bones whatever. The latter result, viz., non-union, does not occur, according to Hamilton, Liston, Malgaigne, Norris, and other authorities, more than once in five hundred cases. Dennis claims to have seen 10,000 cases in which not one case of non-union ultimately occurred. though several required operation. But cases of the condition now under discussion, viz., delayed union, are much more common. We apply the term "delayed union," then, to those cases in which the fragments of the bone remain unattached to one another several weeks beyond the time usually requisite to bring about perfect restoration of the continuity of the broken bone. Very often without any extraordinary treatment union ultimately takes place in these cases, and they are thus rescued from classification in the deplorable list of ununited fractures; but such a narrow limit marks the boundary between the two classes that, in consideration of the one, we find ourselves necessarily overlapping the domain of the other.

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*Delivered at the meeting of the Ontario Medical Association, June, 1895.

Fortunately for us, and for our patients, in the vast majority of cases union of fractured bones takes place in a perfectly normal manner. But this leads us to enquire into the reason why, in the exceptional cases, a contrary condition prevails. Recent investigations, so far as I am acquainted with them, throw no additional light on the subject, and the causes given in all our textbooks are those to which we must still give our adherence. The limited time at my disposal prevents my dealing with etiology, except as it may be incidentally mentioned in speaking of treatment, but I would beg to draw the attention of the association to the fact that there have been reported cases of delayed union, and even of non-union, of broken bones occurring in young, strong, healthy subjects, without any constitutional taint, where the fragments were in good apposition, and the treatment correct in every particular. Porter, Packard, and others have recorded such cases. In otherwords, delayed union sometimes occurs in cases in which *a priori* reasoning would lead us to expect rapid and perfect healing. The knowledge of this should make medical men careful not to let fall unguarded remarks in the hearing of patients so suffering, for many of them are only too ready to enter suits for malpractice.

Having in view this fact, and remembering that such apparently trival and often unavoidable circumstances as the intervention of a fragment of bone, a strand of fascia, or a torn muscle, may determine delay, or non-union, is it any marvel that one is never called upon to treat a fracture presenting any unusual or unfavorable features without seeing in it a possible—even though not probable—source of trouble, chagrin, or vexatious, and perhaps ruinous, litigation?

The ultimate result of any fracture in which, from any cause, constitutional or local, union is delayed must be one of three:

(1) Either spontaneously, or as the result of treatment, osteoplastic activity is at last set up and perfect union takes place, with full restoration of function, and a normal comely appearance.

(2) Union may occur under similar conditions, but with a shortened, bent, or unsightly limb as the result.

(3) Union by bone may refuse to take place, a false joint forms, or fibrous union takes place with greater or less impairment of utility.

THE PREVENTIVE TREATMENT OF DELAYED UNION.

While one cannot doubt that such constitutional dyscrasiæ as scurvy, syphilis, debility, and anæmia, arising from any cause, have an unfavorable influence over repair in bones, I think it cannot be successfully denied that in the vast majority of cases in which union does not take place kindly there is some distinctly local cause for the perverse condition. Such local causes may be in relation to:

(1) The nature and extent of the injury.

(2) Imperfection of apposition of fragments at time of reduction.

(3) Some failure in the working of the retaining apparatus, or other flaw in the after treatment.

In regard to the nature of the wound nothing perhaps is in itself so conducive to non-union as actual loss of bone substance, as in some gunshot wounds. Apart from this, the chief reason why compound factures are more unfavorable than simple is that incidentally germs of suppuration will, in all probability, be carried into the wound and set up their baneful action. If it were possible in such cases to prevent suppuration. the mere fact of a wound of the skin communicating with the fracture would not, to any appreciable extent, delay union of the bones.

While it would be presumption on my part to attempt to give a systematic account of the treatment of fractures to this audience, and would be entirely out of place in this paper, yet I find it incumbent upon me to express some opinion upon the setting and general conduct of such cases as from their nature or character are liable to become instances of delayed union.

In passing, I may interject the opinion that when the local conditions are such as to excite the apprehensions of the surgeon as to the ultimate result, he should, where possible, secure his own safety in case of litigation by consultation with a fellow practitioner as to the line of treatment to be adopted, as well as in reference to the prognosis given to the patient. Another advantage of having skilled aid is that an anæsthetic may then be given, if found necessary. And here I beg to enter a plea for the more general use of anæsthesia in the setting of all, except the simplest, cases of fracture. In compound fractures, in fractures where there is great entanglement of the fragments in the soft parts, and where spasmodic muscular contractions are present, the surgeon is greatly hampered in making a diagnosis of the character of the fracture and in bringing the parts into correct apposition by the cries and expostulations of the agonized patient. Under such trying circumstances, the surgeon is too apt to content himself with an unsatisfying examination and an imperfect reduction, in the ill-founded hope that extension, or the restraining action of the splints, or the moulding power of the muscles will bring the parts into good apposition when the spasm has passed off.

Under anæsthesia, however, the surgeon can usually satisfy himself as to the character and direction of the fracture; he can tell whether the fragments are or are not in correct relation to one another; and he feels no hesitation in putting the limb below the seat of the fracture through those very extensive movements which are sometimes necessary to disentangle the lower fragment from the muscles or fascia, or, what is still more difficult, to draw the soft parts off the sharp point of the upper fragment, which sometimes pierces muscles, fascia, and even skin.

In compound fractures the surgeon may, if necessary, take advantage of the wound to explore with the surgically clean finger, and, where found necessary, the wound should be enlarged so as to allow room for the manipulations or incisions necessary to extricate the fragments from the soft parts and to bring them properly together.

If facilities are at hand for doing so with strict asepsis, I think it is justifiable to cut down upon the seat of injury in the case of simple fractures, if it be found that pertect reduction cannot be achieved by any manipulative process. I am of opinion that the instances where so-called subcutaneous division of an obstructing band of fascia or muscle is justifiable are extremely few, and certainly, if such band is in the line of important vessels or nerves, an open operation is infinitely preferable, as being safer and more accurate.

The question of wiring, pinning, or securing with screws is an important one, but I think it will be conceded that, if the fragments are once brought into accurate apposition with one another, tendency to redisplacement is not very great, and that a properly fitted splint is sufficient guarantee of permanence in the majority of cases. Of course, in fractures of the olecranon, the patella, and the lower jaw, some metallic restraint in good position is almost an essential in order to get bony union, but in the case of long bones, where the conformation of the part is favorable to the use of splints, any more intimate retentive apparatus is seldom required.

Having set the fracture and applied retentive apparatus, we must now inquire how in any given case the surgeon in charge can ascertain whether the normal processes which result in the welding together of the fragments are going on or not. All are agreed that meddlesome surgery, like meddlesome midwifery, is bad. It certainly is injudicious and unjustifiable to remove the splints at frequent intervals, and test by flexions and rotations the degree of union that has taken place. Undoubtedly great harm may result from such interference. In fact, such meddlesome curiosity has, in itself, frequently been a cause of non-union. On the contrary, it is unwise to set a fracture once for all at the time of injury, and then never remove the splints until it is expected they may be left off permanently. It is difficult to state in a general way what rule should be followed in regard to this matter. Much will depend on the nature and seat of the injury. To be as definite as the general character of the question will allow, I consider that it is good treatment to loosen the splints and examine the seat of the fracture within the first forty-eight hours. (If there is burning pain in the skin under the splint, over bony prominences, or elsewhere. this should be looked to as soon as complained of, otherwise a slough may occur.) It is true that there will not be much diminution of the initial swelling, and the tenderness will be great at this examination, but muscular spasm will have passed off. Any gross deviation from the normal length or continuity of the bone may be detected, and the necessary readjustment made more easily than at a later period. Throughout the whole course of the treatment thereafter, it appears to me a wise measure to remove the splints every four, five, or six days, according to circumstances, so as to expose the seat of the fracture for a few moments, at least to the sunlight and air, and to subject the skin and muscles to a light friction and massage in order to prevent what has been very aptly called "local scurvy." Now I wish particularly to state that this must be done without permitting any movement whatever of the fragments upon one another, and I would most strongly deprecate any idea of "testing" the degree of union by bending or rotating the limb. Such testing can do no good whatever, it rarely gives any reliable information to the surgeon, and it may be productive of very great harm.

If, while handling the limb, the surgeon feels distinctly a large formation of callus, it is to a certain degree reassuring, but its absence or small amount does not by any means prove that union is not progressing, for we know that the better and closer the apposition of the fragments the less is the amount of callus produced.

I believe, of course, in passive motion, but, if passive motion cannot be done without risking the union of the bones, then I say wait, and take chances on the movement of adjacent joints. Usually, when the bones are firm one can gradually restore the utility of the joints; but if you fail to get union of the bones, what becomes of the joint? You then have that worst of all combinations—a stiff joint with an ununited fracture in its immediate neighborhood.

In the treatment of fractures due regard must be had to the element of time, and the surgeon should devote his whole skill and attention to the proper treatment of the case, and scrupulously avoid all "testing" of the strength of the union until such a length of time has elapsed that he may reasonably expect that union will be perfect. If it should unfortunately happen that union has not taken place, the surgeon will experience a great disappointment, and the unwelcome news will come as a great shock to the patient, but the former will have nothing to reproach himself for, and the shock to the latter would not have been lessened by two or three weeks of disquieting apprehensions resulting from the suspicion of the unsatisfactory progress of his case that would have been excited by repeated testings.

But there are also some cases in which, even after the full time has been allowed for treatment, and where union is apparently firm, it is found that the callus is soft and yielding, and that it has not become fully ossified. In the case of bones of the upper limb, no ill result may follow the use of a limb in this condition. The moulding power of the muscles, and that admirable adaptive power of nature which tends to the restoration of injured parts to their original form, may serve to keep the limb from warping, or may restore it gradually to its natural shape if it has become bent. But in the lower limb, which has to bear the weight of the body, a very disfiguring degree of bending may take place in a short time. This teaches us that we should make careful note of the shape and length of the limb when the splints are removed, and the patient is allowed a limited use of the limb. The limb should also be inspected a short time after the weight has been put on it, and, if it is found to be yielding, the splints should be reapplied in such a manner that elastic pressure may be used to bring the fragments again into a straight line.

If, however, after the lapse of five, eight, ten, or twelve weeks, depending on the bone affected, the surgeon should find on examination that union has not occurred, what course of action is he to adopt? It is well not to get into a panic is such cases, because, as has been pointed out, union is sometimes delayed a few weeks beyond the usual time without any obvious reason, and then equally without obvious reason reparative action sets in and a satisfactory result ensues. But if the watched-for and longed-for result does not arrive, the surgeon feels that he must do something. Some fifty years ago Sir William Fergusson declared that he would do almost any reasonable thing rather than cut down upon the seat of fracture as White of Manchester had done, and though we are, with good reason, less afraid of making wounds than they were in Fergusson's day, yet the boldest of us will scarcely dare claim that there is no danger in such an operation. In the earlier stages of delayed union, at all events, milder measures may be adopted. Constitutional measures should not be neglected, though I need not enter into details regarding this point.

In regard to local treatment almost any method which is effective in exciting inflammatory action at the seat of fracture will be effectual, provided distinctly that the ends of the bones are in apposition. Perhaps the most effectual and most readily applied measure is by rubbing the ends forcibly together. There, too, I would strongly advise anæsthesia, though some authorities hold that it is not necessary. If the attempt to excite reaction is made at all, let it be vigorous and energetic. No make-believe rubbing of the ends will be of any service. The limb should be flexed, extended, and circumducted at nearly a right angle to the normal axis of the limb, and these movements should be made with a force and vigor amounting almost to violence. In that way, if the bones were not in apposition before, they may be brought together by wearing away the bands or fibres, or the new tissue that may have formed between the bones.

After such treatment the retentive apparatus must be reapplied, and Thomas recommends tight bandaging above the fracture so as to increase the swelling and congestion at the part. Some recommend plaster of Paris splint, but if the fracture is in such a situation that any other form of splint can be applied in such a way as to secure perfect immobility, while, at the same time, leaving the seat of the fracture exposed to the light and air, that is the form of splint to be recommended. If, however, it is found on moving the bones freely that they do not grate against one another, such manipulations will probably be unproductive of good. and the proper course will be to cut down upon the part and proceed to such cutting measures as will serve to bring the bone surfaces together. Moreover, the seat of the fracture may be in such a situation that violent manipulations might endanger the integrity of adjacent vessels or nerves, as, for example, in the middle third of the humerus, where the musculospiral nerve lies in immediate contact with the bone. Here an open operation is greatly to be preferred. For similar reasons, I think the subcutaneous drilling and irritation of the ends by the methods of Dieffenbach and Drainard are to be condemned. I do not deny that benefit often results from such drillings, but I think they should be done with the ends of the bones exposed by incision. Every surgeon of experience knows the perverse tendency of drills to slip from the object against which one thinks he is directing them, and to plunge blindly into adjacent parts, perhaps with disastrous consequences.

TREATMENT OF CASES OF LONG STANDING, OR SO CALLED NON-UNION.

In cases of long standing it is often difficult to know whether to advise operation or not. Sir W. Fergusson relates a case in which a man had such a useful arm, though it was the subject of a false joint, that he passed a searching examination as a recruit and was accepted for the army, and I have in my mind at the present moment a case in which there is ununited fracture of both bones of the forearm, with such slight impairment of function, that the man is able to earn his living as one of the crew of a steam thresher.

Each case must be decided upon its own merits. Much depends upon the age of the patient, the bone affected, and the utility of the limb. For example, an ununited fracture of the upper end of the fibula may be perfectly innocuous, and even in case of the humerus there may be almost no impairment of function whatever.

In the endeavor to be as definite as possible, I would say that in the case of a young man, otherwise in good health, with an ununited fracture of the upper extremity, and almost perfect utility of the limb, though I would not *urge* operation, I should be willing to undertake it after fully explaining the risks, dangers, and uncertainties of the results. If the arm were useless, or comparatively so, I should certainly advise the operation, even in a middle-aged or elderly man. In advanced years, however, with fair utility of limb, I should be inclined to refrain from interference.

In the lower limb I think we should be more aggressive, and should always attempt to get bony union by operative procedure. Even here, however, by means of a close-fitting leather or rawhide casing, the limb may often be made to support the body and perform its functions surprisingly well, and cases are recorded in which union ultimately took place after such an appliance had been worn for more than a year. The operative procedure in a case of old-standing is very different from that which is appropriate to a more recent case. In the former any treatment would be inadequate which stopped short of a free open incision with the removal of the false joint, the pointed or rounded ends with closed medullary canal which have resulted from a rarefactive osteitis, or the fibrous bands which remain as the abortive results of the attempt at the formation of callus. It is obvious that such an operation must result in a shortening of the bone. This makes little difference in the humerus, and it can be compensated for in the case of the femur, but, in the case of ununited fracture of one bone of the forarm or leg, it may necessitate the removal of a section of its unbroken companion, so as to make both bones of the same length. This, of course, adds very materially to the gravity of the operation, and must be allowed due weight in the consideration of the advisability of recommending any operation at all. After such operation the bones may be held in position by wiring, or by means of screws. Time will not permit, however, of my going into details as to the mechanical treatment.

In this paper, Mr. President and gentlemen, it will have been observed, perhaps with disfavor, that I have not given any lists of causes or lines of treatment. I have not quoted authorities, though I have consulted them extensively in preparing the paper, I have not brought forward a single new thing; but I have tried to outline in a brief and imperfect way what I consider to be the best way to avoid delayed union in the treatment of fractures, and the measures best adapted to restoration of osteoplastic activity when delay has occurred.—*Canadian Practitioner.*

Society Reports.

PHILADELPHIA ACADEMY OF SURGERY.

STATED MEETING OCTOBER 9, 1895.

Dr. Thomas J. Mays read a paper on "The Local Application of Cold in Acute Pneumonia. (See page 321.)

DISCUSSION.

Dr. John T. Carpenter, of Pottsville, being present, was invited to open the discussion; he said: My object in coming here was to hear the views of some of the leaders of the profession, and not to talk myself. It is therefore with great diffidence that I speak, modified somewhat by the fact that I have had considerable experience with cold applications in pneumonia, and entertain decided views as to the value of treatment by this method. It seems to me that the treatment by cold is only one part of a great subject, which is the treatment of such forms of infectious disease as are attended by great depression of the nerve centres, by cold. For the past forty years in which I have practised medicine it has been my fortune to be cast among a great many of these cases—cerebro-spinal fever, typhoid and scarlet fevers, diphtheria, and pneumonias—and in all these cases, even prior to the use of cold in pneumonia, I had fallen into the habit of using hydropathic methods of treatment. Cerebro-spinal meningitis was the first that I so treated. In scarlet fever I always used the cold-water treatment ever since I read an article published in 1839 by Dr. Samuel Jackson, of Northumberland. I also used ice-poultices to the neck in scarlet fever and in diphtheria. It was therefore very easy for me to come to the treatment of pneumonia by ice-cold applications. About four years ago I began to use this method. I limited it to the graver cases, and did not use it in those cases of pneumonia which were manifestly manageable by the ordinary means. In the milder cases I followed Dr. Bennett's plan and allowed them to trust to Nature. I encountered much prejudice in my neighborhood against this method of treating pneumonia, and only used it in grave cases; but in the last four years I have had some twenty-four cases, which I insisted upon treating with this heroic remedy. One of the most interesting of these was that of a miner, a young man, who had a temperature of 104 degrees on the fourth day of the disease, with great nervousness, and he was apparently doomed to die. I was called to see the case in consultation, and after finding that the usual methods had been used, I recommended the ice-bag as the only addition I could make to the management. In two days great improvement was manifested; the respiration improved, the pulse grew stronger, and the temperature was reduced. But what struck me most was the disappearance of the physical signs from the chest. Another case was one of typhoid fever in the fourth week, with pneumonia, which presented symptoms of having been badly treated, and apparently had only a short time to live. I applied ice-bags to his chest and in two days later the delirum had passed away, the temperature was reduced, and the patient became convalescent and recovered in a very short time. I have applied this treatment in various other cases with equally good results; but, unfortunately, I have not kept notes, and can only say that out of about twenty-four cases of pneumonia treated in this way I have only lost two; one was an alcoholic subject, a case of chronic fibroid pneumonia with cavities in both lungs, whom I was called to see in an attack of intercurrent acute pneumonia, but who died on the next day. The other was a woman, worn out and exhausted, who died on the fifth day, after the pulmonary symptoms and signs had faded away.

In my use of ice in the treatment of pneumonia I have been struck with two things, the first being the rapid disappearance of the physical signs. I have had several cases in which the consolidated lung cleared up so thoroughly after two days that, on listening to the chest, it would have appeared to a new observer that I had made a mistake, if I had not known otherwise I would have said that there had been no pneumonia there. In other cases I have found the consolidated areas disappearing under the ice-treatment, and the crisis coming on much sooner than by any other treatment with which I am acquainted. The second point noticed was the speedy relief to pain and fever. These facts I offer from my personal knowledge in preference to discussing any theory of the mode of action of this valuable therapeutic agent.

Dr. F. P. Henry: With regard to the treatment of pneumonia with ice and cold applications to the chest, I have often treated sthenic cases of pneumonia in this way with decided benefit; but, like Dr. Carpenter, I have not felt it to be necessary to resort to them in all cases. As I arrived late, I am not aware whether Dr. Mays referred to the statistics of Dr. Lees, of England. Dr. Lees claims remarkable success from treating pneumonia with ice to the chest. It was through his reports that I was first induced to employ this method.

Dr. A. J. Downes: In February last I had a man, seventy-six years of age, with pneumonia, which had commenced with a chill four days previously. I applied ice to his chest, and in two days his temperature was normal, but two days later he died. The facts remain, however, that the symptoms disappeared, the pain was relieved, and the temperature reduced to normal. In a case of acute phthisis, also, in which I ordered ice applications, the progress of the case, which had been very rapid, was checked, and he has been better ever since. The tubercular process which was going on in the upper part of the lower lobe seemed to be perceptibly improved.

I have a suggestion to make in regard to the rubber bags; they should have a drainage-tube attached, so as to carry off the water so that the ice will mould itself better to the side of the chest. I have another suggestion: It is that the rubber bag can be made into a jacket; in this shape it is much easier to keep the ice applied. I had such a jacket made for this patient with phthisis, to be worn with straps over the shoulders and laced up in front like a shoe, which holds the ice in contact with the chest.

In March last I reported four cases of typhoid fever treated by ice, and I have had seven cases more since then, making eleven cases which have had nothing in the way of treatment except ice, with periods of intermission, the longest and most continuous application was fifty-five minutes on and five minutes off, kept up night and day. In two cases there was sloughing; in one I had an ulcer which took a month to heal, and another had one the size of a silver dollar. Some of them were exceedingly bad cases, but there was no delirium after the ice was applied, and there was absence of tympany and diarrhœa.

Dr. Stahl: I recall a case of pneumonia treated by this method. After hearing Dr. Mays' paper last spring, I decided to try the treatment by ice. In my service at St. Agnes's Hospital, in thirty-one cases of typhoid fever treated by cold baths, there developed in one case a pleuro-pneumonia. The question came up whether or not to continue the baths; the temperature was then between 105° and 106°. I decided that the baths should not be discontinued on account of the pleurisy and pneumonia. In a few days the consolidation and exudation disappeared, but there still remained some effusion in the pleura. The patient was comfortable while the baths were being given, and everything seemed going on well, when the patient died. The autopsy revealed resolution at the base of the left lung, and some congestion in the right. It also revealed the existence of phthisis, several small cavities being found in the right lung, and the history showed that the patient had suffered from poor health for several months previous to the attack of pneumonia. I mention this case merely to affirm my faith in the treatment of pneumonia by cold, in spite of the fatal result in this case.

The President: I hold the same opinion as the members of the Society with regard to the use of cold, and particularly the direct application of ice to the chest in pneumonia. I shall only point out one or two matters which have been suggested or which have been touched upon during the discussion. One point is the coincidence between the treatment of cerebro-spinal meningitis by ice, and this treatment of pneumonia which was mentioned by Dr. Carpenter. The other point that occurs to me is the remarkable series of statistics presented by Dr. Mays in these tables which he has presented. I will only point out the difficulty of drawing conclusions as to the results of treatment in pneumonia, even where large numbers of statistics are presented.

From the pathological standpoint, we have in croupous pneumonia a definite series of lesions; but, clinically, we have the most varying general phenomena as well as the most varying local phenomena. So that while we may determine the existence of pneumonia by the physical signs, yet we have the most diverse local and general symptoms in different cases of the disease.

We have pneumonia of the child, and we have a pneumonia of the adult; we have a croupous pneumonia of childhood, and a croupous pneumonia of old age; we have a pneumonia of the drunkard, and a pneumonia of the debauché from exposure during a debauch; there is also the pneumonia as a result of an infectious process. Then we have the pneumonia which constitutes the terminal event in nephritis, in visceral cancer, and so on; and every clinician knows that while on post-mortem table the lesion appears the same, whether involving a greater or less proportion of the lungs, the symptoms of the disease are so diverse that were it not for the post-mortem appearances we should erect a series of diseases upon the clinical symptoms.

As regards treatment, a guarded symptomatic treatment is sufficient to treat successfully a large number of these cases. On the other hand, there are a large number in which a lethal result is a necessity; for instance, in those where the pneumonia constitutes the terminal event. Therefore we recognize some which are essentially curable and others which are incurable. Between these there are a great many varieties, depending upon habits of life, conditions of disease, and so on. Therefore, while we are agreed that in a number of cases the application of ice to the chest renders the course of the disease more favorable and relieves the symptoms, we are obliged to recognize the fact that there are a number of cases—and, I think, a larger proportion than Dr. Mays's statistics would lead us to conclude—in which treatment by ice would not be followed by such favorable results, because if a sufficiently large number be taken there must be a number in which no treatment would be followed by good results. Therefore, I hold that all statistics of pneumonia brought out to show the effects of treatment by any particular method should give details of individual peculiarities in cases and groups of cases, in order to form any conclusion of value. The difference between the mortality-rate of 20 or 30 per cent. and that reported by Dr. Mays is not to be accounted for solely by the fact that applications of ice were used, but by conditions which enter into those cases of pneumonia which do not appear in the tables.

Dr. Mays: I merely wish to say that these statistics are based on 194 cases, and include those which were presented in my former report. There are, I think, only two cases, which on account of lack of time I did not read, in which the ice applications apparently aggravated the condition. In these it was discontinued for about twenty-four hours, and then reapplied with marked benefit. Barring these two cases, I do not think there is a single case in the whole of the 194 cases where a prejudicial effect was produced by the use of the ice. It is a fact that all observers in this collection agree that the use of the ice was followed by benefit. These records also make a very favorable showing for the treatment when we recall the fact that they are not selected cases, but include all conditions, such as the senile, the infantile, the alcoholic, and the extreme neurotic.

In regard to the pnenomenon which Dr. Carpenter has mentioned, viz., the rapid evanescence of the physical signs in the lung under the influence of the ice, and at which he expressed his astonishment, I must say that I was as much astonished as he was in my earlier experience, and of which I spoke in my first paper on this subject about three years ago. In many of these cases I felt that I might have been mistaken in my first diagnosis; but, after experiencing this change so often, I am no longer surprised when I come to examine a lung and find it full of râles in areas where, the day before, it was consolidated and no râles to be heard. Where there was no crepitation before, the air now enters and crepitation and mucous râles are heard, and the lung begins to clear up. This clearing up of the lung I consider one of the most important phases in the ice treatment of pneumonia. I want to thank those who have taken part in this discussion, and I am much gratified at the concurrence of opinion as to the value of the ice treatment.

RECENT SUGGESTIONS IN THERAPEUTICS.

MERCURY IN HEART DISEASE.—William Murry, of Durham, Eng. (*Lancet*, September 28, 1895), is convinced from repeated observation that mercury possesses a value far beyond its supposed alterative action, and that it tells upon the heart itself. Its special benefits are exercised in cases of dilated and hypertrophied heart. By means of it the "thready," weak, rapid, and irregular pulse is made full, soft, regular, and slow, with manifest relief of such symptoms as dyspnœa, pectoral weight and tightness, and sensations of faintness. The "angina sine dolore" is often marvelously relieved and removed by 2 or 3 grains of blue pill three times a day, and the severe forms of "angina pectoris" not unfrequently disappear under its influence. While the nitrites, nitroglycerin, etc., afford temporary relief, this remedy is much more permanent in its effects. "Nor need I say that to give digitalis a fair chance it is absolutely necessary to pave its way by preliminary doses of mercury and to foster its action by repeated doses. Many of the cases where digitalis, etc., fail, or seem to fail by supposed accumulation depend on this, that we are giving the digitalis without the blue pill or calomel. The same is true of iron and digitalis. Mercury should be given until the portal system is drained and a slow, soft, regular, and effectual pulse is produced, when digitalis or strophanthus can be used as cardiac tonics, followed by iron and digitalis." —*Universal Medical Journal.*

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ROBERT D. JEWETT, M.D., EDITOR.

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Editorial.

MEDICAL EXAMINATION FEES.

An effort is being made by several of the leading life insurance companies to reduce the fees of their medical examiners from $5 to $3 for each examination. What the result of this effort will be remains to be seen, but we hope that the members of the regular profession will not permit the insurance companies to dictate the price for their services. These companies are very exacting in their requirements, and very properly so, for on the knowledge and kill of the medical examiner a very great deal depends. They realize that the medical examiner stands between them and the loss of thousands of dollars, and for this reason they select only such men as can give good testimonials, some companies restricting their appointments to members of the State Societies. It is to the advantage of the agent to secure as many risks as possible. It makes no difference to him whether they be desirable or otherwise, as his commissions come chiefly out of the first assessment, and it is to protect the company from having agents saddle upon them men who, knowing themselves to be unhealthy, are naturally anxious to have insurance, that the companies have established the custom of having all applicants examined by a reputable and skillful physician.

It may turn out, then, that the saving of two dollars on each examination may be more than equalled by increased losses through the acceptance of unfavorable risks. The loss of one $2,000 risk will neutralize the savings on a thousand applicants, and it is highly probable that the increased acceptance of favorable risks will exceed 1 in 1,000; for if the best men who make the examinations now refuse to make them for $3, the companies will have to fall back on the *cheap doctors*. These may be found in all communities, probably, but they are, in nearly every case, without the fold, and their main idea is to make an extra dollar. Whether they will strictly interpret their responsibility to the insurance companies, whose interests it is their duty to protect, will be a matter for the companies to decide.

A lawyer charges from $10 to $25 to write a deed for a piece of property, though it may require only a page of legal cap to contain it, and though the property may be worth only $500 or $1,000. It is not the labor expended in writing the deed that he charges for, but his knowledge in judging of the soundness of the deed. So it is not the labor expended in making a physical examination that the physician charges $5 for, but his knowledge in judging of the physical condition of the applicant, whether or not he is a safe risk. At the same time, the labor and time expended in making a careful examination, including urinary examination, is not inconsiderable. And sometimes an applicant has to be seen several times in order to test the permanency of some abnormal condition. But it is not necessary to make any apology for our charges. It should be sufficient that we place such an estimate on our services, and having set this price we should consider it lowering the dignity of the profession to permit an individual or a corporation to dictate a lower price.

If we submit quietly in this matter like dumb hirelings, and lead them to think that we are glad to get whatever their magnanimous generosity may see fit to throw to us, where will the matter end? Are they not as likely to make a further reduction of one or two dollars? Is there not as much reason in their saying "your services are worth only one dollar" as to say they are worth only three?

The companies are bound to have the better class of physicians for their examiners, not only for their protection against unfavorable risks, but bscause the people's estimate of the standing of a company would be influenced in some degree by the professional standing of its corps of medical examiners. Let us stand firmly for our rights, then, and maintain our dignity.

At a meeting of the Wilmington Medical Society, held November 18, 1895, a resolution was adopted that the fees for medical examinations for life insurance companies (all being considered life insurance companies that have no features as benevolent societies or brotherhoods) where the policy is for $1,000 or upward, shall in no case be less than $5 for each examination. A committee was appointed who drew up and presented to a meeting of the Society, held November 25th, an agreement to the above effect, which agreement bears the signature of every reputable white physician in the city of Wilmington.

The Secretary was instructed to have this agreement printed over the names of the signers, and to mail a copy to each life insurance agent in the city and to the home office of each life insurance company doing, or that may hereafter offer to do business in this city.

There seem to be, then, only three conditions between which the companies will have to choose—discontinue business, pay $5 for their medical examinations, or import a man to make their examinations—which will they choose.

THE SOCIETY TRANSACTIONS.

The Transactions of the State Society for 1895 are out and have been mailed. As usual there are a number of members who have not recieved a copy. Some of these, we greatly regret to say have been dropped from the list of members, and cannot be reinstated until the next meeting of the Society. A good many, however, are delinquent only two or three years in their dues.

If you have failed to receive a copy of the transactions, write to the Treasurer of the Society, Dr. M. P. Perry, Macon, N. C., and see where the trouble is. If you are behind only two or three years send him the amount and he will instruct the Secretary to forward your copy. Failure to receive your Transactions is a reminder tha you are in danger of suspension if you permit your dues to go unpaid four consecutive years.

Reviews and Book Notices.

The Physicians Visiting List for 1896. Forty-fifth year of its Publication. Philadelphia: P. Blakiston, Son & Co.

This old reliable visiting list will continue to be a favorite with the profession. Its size is convenient for the pocket, being of thin paper with flexible back. The usual convenient aids to the physician are to be found in the front. The table of doses has been entirely rewritten by Dr. George M. Gould. We note the omission of some of the reading matter contained in the 1895 List. This is done to make room for additional conveniences in the chief part of the list.

The space for the name of the patient has been made larger, a column for the weekly amount and one for ledger page have been added; also a space for special memoranda opposite each name. The lists for 75 and 100 patients will be published in two volumes thus making the book more convenient for the pocket.

The Medical News Visiting List for 1896, Philadelphia. Lea Brothers & Co., 1895.

This popular list is now ready. There are no important changes from the list of 1895. The same tables are to be found in the reading pages, chief among these being those of weights and measures, for determining the day of confinement, incompatibles, poisons and their antidotes, ligation of arteries and theropeutic reminders. The list is arranged for thirty patients a week. The different memorandum departments are provided with a thumb index for easy reference.

Abstracts.

GANGRENE OF THE LEG FOLLOWING TYPHOID FEVER.—Quervain (*Centralblatt für innere Medicin*, No. 33, 1895), remarking the rarity of the occurrence of gangrene following typhoid fever, notes the cases so far reported, and to them adds another, a personal observation of his own. The patient was a man aged 25 years, previously healthy, who had had an attack of typhoid fever of moderate severity. As defervescence began, he became affected with severe pain in the right leg, to which were added, in a few days, paleness of the foot and lower part of the leg, diminution of sensibility and temperature; no edema. The pain became very intense and the pulse and bodily temperature increased. There were no symptoms of endocarditis. The popliteal space and below became slightly edematous and very painful and tender, so that an abscess was thought of. Later there was absolute loss of motion and sensation, cyanotic discoloration, alternating with paler spots, commencing line of demarcation. This later progressed. There then occurred edema of the left foot and leg, great pain, and tenderness along the great vessels to the groin. The thrombosis of the vein quite evident; palpable. Finally, the right leg was amputated above the knee. Despite exacerbations of phlebitis of the left leg, a superficial gangrene of a small part of the skin covering the stump, and a bed-sore the patient made a good recovery. The popliteal artery was loosely filled with a red, rather firm thrombus which reached as far as the middle of the leg, filling many branches of the artery. The popliteal vein was filled with a rather tightly adherent, firm thrombus, also extending to smaller branches. The vessel sheath was slightly edematous and embedded in an intermuscular abscess. The abscess consisted of pus corpuscles and blood, degenerated cells, and numerous typhoid bacilli; no staphylococci nor streptococci. Regarding the causation, he considers three possibilities,—

(1) There may have occurred a deep intra- or inter-muscular abscess (or periarteric or periphlebitic abscess) caused by the typhoid bacillus. Then ensued damage to the vessel walls and arterial and venous thrombi.

(2) There may have occurred a phlebitis caused by the typhoid bacillus; then periphlebitis with abscess, periarteritis, and thrombus.

(3) Or there may have occurred a primary arteritis caused by localization of the typhoid bacillus on or rather in the arterial wall, then arterial thrombus, periphlebitis, phlebitis, abcess.

He is disposed to accept the last as the proper explanation of the process, and thinks he should not speak in this case of a marantic or toxic thrombus, but of a thrombus due to metastasis of the typhoid bacillus.—*University Medical Magazine.*

ABSINTHISM AND ITS DANGERS.—Driving in any part of Paris in the morning about 11:30 o'clock, or in the evening at 6 o'clock, one sees hundreds of French men and women seated at the little tables in front of the *café*s drinking, and three out of every four are sipping absinthe. This distillation of an herb that grows in some parts of France and Switzerland contains, besides alcohol of 85 per cent., an essential oil which possesses for *absintheurs* a fascination. The liquor when poured out resembles in color Scotch whiskey, but when a perforated silver spade is put across the top of the glass with a lump of sugar on it, and water allowed to drip slowly through, it assumes an opalescent green color with a taste of anise seed. It is now ready for consumption, which requires from one-half to three-quarters of an hour. The *absinthen* then goes home with an excellent appetite and lies down at night to voluptuous dreams. Next morning he awakes quite well, and the absinthe of the day before acts as a mild aperient. But soon the scene changes, and in a few years or a few months, as the case may be, and as the number of glasses a day has been smaller or larger, we see him a prey to tremblings, epilepsy, dementia, neurasthenia or convulsions, cerebral or spinal congestion, paralysis, etc. For this, one, two, three, or at most four absinthes a day are enough. One of the first actions on the nerve centres is to annul all sexual desire, and it is from this cause—absinthe—that the population of France is decreasing, while suicide, crime, insanity and diseases of the nervous system are increasing. Professor Laborde injected recently, before his class, twenty drops of the essence of absinthe into a guineapig, which died after a series of epileptiform convulsions; during the interval the animal stiffened itself on its four legs, curved its back in *arc de cercle*, and then fell down repeatedly, agitating its fore-paws wildly and crying piteously until death ended its suffering in forty-five minutes after the injection.—*Dominion Medical Monthly—The Medical Age.*

THE TREATMENT OF ASPHYXIA NEONATORUM.—Prochownick (*Centralblatt für Gynäkologie*, 1894, No. 10) describes a new mode of treatment of asphyxia neonatorum which he proposes as a substitute for Schultze's method. It consists in suspending the child by the feet, the head being lightly supported. If no assistant be available to hold the child's feet, the operator grasps the ankles between the fingers of his left hand. With the right he grasps the chest, the thumbs being in front, and makes six to eight regular compressions; at first expiration. The nose and mouth are freed from any mucus, which allows air to enter with the inspiratory effort. It may be necessary to douch the suspended child with warm water to assist the respiratory efforts.—*University Medical Magazine.*

AN IMPORTANT POINT IN THE EXAMINATION OF SPUTUM.—Much has been written as to different modes of procedure in the microscopical examination of sputum for the bacillus tuberculosis, such referring mostly to certain particular methods of staining and not touching on the point to which I wish to draw attention. The ordinary method, perhaps because of its being the easiest and not requiring special apparatus for its completion, of selecting particles to be mounted in tubercular examination is to select the lenticular cheesy masses contained in the sample, if such be present.

Microscopial examination of stained slide mounts of these masses, if the specimen be tubercular, will usually reveal the organism, but frequently will not and therein the difficulty lies.

It is a fact that the absence of the tubercle bacillus in a certain sample of sputum does not prove conclusively that it was from a non-tubercular source, for frequently the tubercular organism is absent from the sputum of consumptives for several days at a time, but the failure to find the organism when it is present seems hardly excusable.

If the technique of the operator is what it should be, and we will assume that it is, and if the bacillus tuberculosis is contained in the sample and yet not shown by examination, the error must lie in the only remaining factor, that is, the method by which the portion to be mounted was selected.

The only reliable method of examining sputum for tubercular infection is to select the portion to be mounted in such a manner as to be sure if the organism is contained in the sample it will be revealed in the mount.

This can be accomplished in the following way: As soon as the sample of sputum is received (and physicians should caution their patients to furnish bronchial and not pharyngeal secretion in a well-stoppered bottle), add to the sample about an equal volume of a 3 per cent. solution of sodium hydrate, shake well the mixture, and place one side to allow sedimentation. After a few hours draw from bottom of the bottle by means of a pipette what sediment may be present and centrifugate this sediment for about three minutes. If the bacillus tuberculosis be contained in the mixture, on centrifugation it will go to the bottom and will invariably be present in the first mount from the bottom of the tube.

As to methods of staining there are several good ones, but the one in my experience which gives the most uniform results is that of Liehl-Gabbot for cover glass preparation.—*Wm. G. Bissell*, *Buffalo Medical Journal.*

THE LIGATURE IN OÖPHORECTOMY.—Penrose (*American Journal of Obstetrics*, August, 1895) in a paper calling attention to some disadvantages which attend the commonly-used method of ligating the pedicle in operations for removal of the uterine appendages. The methods usually employed by most operators, in a routine way, are the Tait-Staffordshire knot and the interlocking or link ligature. The objections to these he writes are: The liability to slip; the difficulty or impossibility in some cases of removing all of the ovary and tube. The fact that the broad ligament is puckered up and made more tense than normal and may for this reason cause subsequent pain and discomfort. An unnecessary amount of tissue is strangulated. He says most operators have seen cases, either in their own experience or in the experience of others, in which the ligature has slipped from the pedicle, either during the operation or some days afterwards. He thinks that this accident, usually unrecognized, is a very common cause of death after oöphorectomy. Tait has referred to a certain number of cases in his own experience in which hematoma occurred in the broad ligament some hours or days after operation. He (Tait) says, "I cannot form any exact estimate of how many cases of these operative hematoceles I have seen, but it certainly is not less than fifty, and is more likely to be seventy or eighty." Penrose believes that this accident is due to the retraction or slipping of the artery from the embrace of the ligature, while the remaining mass of tissue which forms the pedicle is still retained, and the hemorrhage is, therefore, confined to the broad ligament. He has seen this accident happen before the abdomen has been closed, and has sought for and ligated separately the retracted vessels. Slipping of the ligament he says is due to the form of the mass of tissie which is ligated. The broad ligament is drawn up into a more or less conical shape, all parts converging towards the ligature, and the ligature is really placed at the apex of a cone, from which it may readily slip. The elastic artery, tied when upon the stretch, tends to retract and escape from the embrace of the ligature. The second objection is the difficulty or impossibility of removing all of the ovary and tube; where the broad ligament is tense, as it is often in single women, of if thickened from inflammatory deposit, it is sometimes impossible to bring the tube and ovary through the abdominal incision and to obtain a pedicle which can be ligated so that with safety all of the ovary may be removed. The third objection, the puckering and tension of the broad ligament, is probably of less importance than those just considered. However, he believes that some of the pain which women suffer after oöphorectomy is due to traction and countertraction exerted by different parts of the broad ligament upon a sensative cicatrix. The broad ligament is pulled up from different directions and converges to the cicatrix, which becomes the point from which the lines of traction radiate. The fourth objection appeals to the surgical sense. It is always better surgery to ligate the vessel alone than to include with it a mass of surrounding tissue. Penrose believes that the above objections may all be avoided by ligating the distal and the proximal portions of the ovarian arteries with distinct ligatures and then cutting away the tube and ovary. The method of procedure is as follows: The first ligature is passed through the broad ligament near the pelvic wall, securing the proximal portion of the ovarian artery. The second ligature is passed through the broad ligament at the uterine cornu, securing the distal portion of the artery. The second ligature may include the Fallopian tube if there be no disease of the isthmus, or it may be passed immediately beneath the tube if it be necessary to exsect the tube from the uterine cornu. With ligatures thus placed the tube and ovary may be completely and safely removed. Usually there is no bleeding from the portion of the broad ligament between the ligatures. It is not necessary to place both ligatures before cutting away the ovary and tube. The first ligature may be placed about the proximal portion of the ovarian artery and then the infundibulo-pelvic ligament may be cut, bleeding from the distal end being arrested with forceps. The advantages of this method he believes are: the ligatures are placed about the vessels while in its normal position, and there is no tendency to retraction or slipping. The minimum amount of tissue is included in the ligatures. All ovarian tissue can be removed. There is no traction whatever upon the scar. —*University Medical Magazine.*

Miscellaneous Items.

Under this head space will be given (free of cost) to those paid-up subscribers who desire to change their location, or to dispose of practice or property. One insertion will be allowed, but inquiries must not be ordered addressed to this office.

Any news connected with professional men and matters in North and South Carolina will be appreciated by the Editor.

OFFICIAL LIST OF CHANGES IN THE PUBLIC SERVICE.

MARINE HOSPITAL SERVICE.

For the fifteen days ending November 15, 1895:

Fessenden, C. S. D., Surgeon, ordered to proceed from Salem to Boston, Mass., for physical examination November 14, 1895.

Carmichael, D. A., Passed Assistant Surgeon, relieved from duty at St. Louis, Mo., and directed to proceed to Vineyard Haven, Mass., and assume command of service November 1, 1895.

Brooks, S. D., Passed Assistant Surgeon, relieved from duty at Chicago, Ill., and directed to proceed to St. Louis, Mo., and assume command of service November 5, 1895.

White, J. H., Passed Assistant Surgeon, granted leave of absence for twenty-three days, November 5, 1895.

Perry, T. B., Passed Assistant Surgeon, granted leave of absence for thirty days, November 11, 1895.

Cobb, J. O., Passed Assistant Surgeon, to proceed from Port Towns and to Port Angeles, Wash., as quarantine inspector, November 1, 1895.

Stoner, J. B., Passed Assistant Surgeon, to proceed from Detroit, Mich., to Baltimore, Md., for temporary duty November 1, 1895.

Gardner, C. H., Assistant Surgeon, to proceed from San Francisco, Cal., to Chicago, Ill., for duty November 5, 1895.

Norman, Scaton, Assistant Surgeon, to proceed from Baltimore, Md., to New Orleans, La., for duty November 1, 1895.

Thomas, A. R.,-Assistant Surgeon, to assume temporary command of service at St. Louis, Mo., November 1, 1895.

Greene, J. B., Assistant Surgeon, to proceed from Vineyard Haven, Mass., to Baltimore, Md., for duty November 1, 1895.

THE NAVY.

For the two weeks ending November 23, 1895.

Owens, T., Surgeon, detached from Naval Station, Port Royal, S. C., and granted three months leave, November, 11, 1895.

Waggener, J. R., Surgeon, detached from the "Independence" and ordered to the Mare Island, Cal., Navy Yard, November 12, 1895.

Bradley, Geo. P., Surgeon, detached from the Mare Island, Cal., Navy Yard and ordered to the "Indiana."

Rothganger, Geo., Passed Assistant Surgeon, detached from Naval Hospital treatment and ordered to the "Independence."

LaMotte, H., Assistant Surgeon, detached from the "Constellation" November 16, and ordered to the Naval Hospital, Chelsea, Mass., November 18, 1895.

Gardner, J. E., Surgeon, ordered to Port Royal, S. C., Naval Station.

November 19—Medical Director P. S. Wales, ordered to duty as member of the retiring board, Washington, November 25, in addition to his present duties.

November 22—Passed Assistant Surgeon R. P. Crandall, detached from the naval laboratory and ordered to the naval hospital, New York.

Passed Assistant Surgeon Philip Leach, detached from the naval hospital and ordered to the naval laboratory, New York.

THE ARMY.

From November 14, 1895, to November 27, 1895.

Leave of absence for one month, to take effect about December 4, 1895, is hereby granted Maj. George W. Adair, surgeon, Washington Barracks, D. C.

Leave of absence for four months, to take effect about December 10, 1895, is granted Capt. George McCreery, assistant surgeon.

First Lieut. Irving Wallace Rand, assistant surgeon, will report in person without delay to the president of the Army Medical School for the course of instruction prescribed in General Orders No. 78, September 22, 1893, from Adjutant General's office.

Appointments.

To be Assistant Surgeons with the rank of First Lieutenant November 15, 1895.

Thomas Jellis Kirkpatrick, Jr., John Hamilton Stone, Irving Wallace Rand, Powell Conrad Fauntleroy.

Promotions.

Maj. Justus M. Brown, Surgeon, to be Deputy Surgeon General with the rank of Lieutenant Colonel, November 15, 1895.

Capt. Daniel M. Appel, Assistant

Surgeon, to be Surgeon with the rank of Major, November, 15, 1895.

Retirement.

Lieut. Col. John R. Gibson, Deputy Surgeon General November 15, 1895.

Thomas Jellis Kirkpatrick Jr., and John Hamilton Stone, appointed Assistant Surgeon with the rank of First Lieutenant to rank as such from November 1895, and ordered to report to the president of the Army Medical School for instruction.

The leave of absence granted Capt. Eugene L. Swift, Assistant Surgeon, is extended one month, and he is authorized to go beyond sea.

The leave of absence granted Maj. Joseph K. Corson, Surgeon, is extended twenty days on Surgeon certificate of disability.

NECROLOGY.

SOME RECENT DEATHS AMONG THE PHYSICIAS.

Franklin Townsend, Jr., M.D., at Albany, N. Y., October 31.

Thomas F. Young, M.D., at Brooklyn, N. Y., October 26.

H. W. Rand, M.D., at Brooklyn, N. Y.

Richard B. Fruit, M.D., at Hazleton, Pa., November 10.

Joseph W. Brockbank, M.D., at Philadelphia, Pa., November 7.

George F. Jackson, M.D., at New York, October 7.

Dwight Morgan Lee, M.D., at Oxford, N. Y., October 5.

Charles Bartow, M,D., at Astoria, L. I., October 26.

Ross O. Sidney, M.D., at Brooklyn, N. Y., October 31.

John Lloyd Zabriske, M.D., at Brooklyn, N. Y., November 11.

Robert Battey, M.D.,at Rome, Ga., November 8.

Joseph C. Gilbert, M.D., at Philadelphia, October 26.

Joseph D. Schoales, M.D., at Philadelphia, October 24.

Basil Norris, M.D., U. S. A., at San Francisco, November 11.

Richard Lennox, M.D., at Brooklyn, N. Y., November 14.

John A. Thurber, M.D., at New Orleans, November 9.

Benjamin F. D. Adams, M.D., M. M. S. S., at Colorado Springs, Col., October 28.

Dyer Ball Nelson Fish, M.D., M. M. S. S,, at Amherst, October 28.

Dr. Hiram Woods has been elected to the Chair of Diseases of the Eye and Ear in the University of Maryland to succeed Dr. J. J. Chisolm.

Pediatrics is the name of a new journal to be devoted to diseases of children which will soon appear under the editorship of Dr. George A. Carpenter, of London. It is owned by Dr. Dillon Brown, and will be published semi-monthly.

The city of New York has appropriated $5,000 a year for the support of the Pasteur Institute, in that city, conducted by Dr. Paul Gibier.

The State Board of Charities of Massachusetts has announced that the Craig Colony for Epileptics will soon be ready to receive a limited number of public patients, to be apportioned from the various counties of the State. This method of caring for this unfortunate class is probably the most successful, humane and economical, and it is to be hoped that the authorities of this State will study the system as there carried out, and be influenced to establish a colony in this State. The original outlay need not be great, and the running expenses could be reduced to a minimum by the work of the patients, if under the control of a competent person.

Bellevue Hospital is to have a new system of baths—Turkish, Russian and medicated—to cost $10,000.

During the months of July, August, September and October, the physicians of Raleigh, N. C., wrote 981 charity prescriptions, for which the city had to pay $369.42, an average of about 36⅗ cents each. The city of Wilmington with 7,000 or 8,000 more population, pays 10½ cents each for prescriptions, and the monthly cost is only about $25. A change in Raleigh's system is evidently in order.

Dr. J. T. J. Battle, of Wadesboro, N. C., writes: Recently I have noticed that some of the Insurance Companies are sending out circulars to their physicians, stating that hereafter the fee for examination of applicants will be $3.00 instead of $5.00, the former fee. These companies have their work done very carefully and thoroughly as they should do, and it is well worth the $5 charged. For one I never expect to charge them less and the object in writing this is to urge the profession to be united and hold out for the original fee.*

See editorial in this issue.

At the last meeting of the Tri-State Medical Society (of Iowa, Illinois and Missouri) the following officers were elected: President: Dr. Robt. H. Babcock, Chicago. First Vice-President: Dr. A. H. Cordier, Kansas City. Second Vice-President: Dr. W. A. Todd, Chariton, Ia. Treasurer: Dr. C. S. Chase, Waterloo, Ia. Secretary: Dr. G. W. Cale, St. Louis.

The next meeting will be held in Chicago the first Tuesday, Wednesday and Thursday, in April, 1896.

QUEER EXPERIENCES BY DOCTORS.—A doctor of Brenham, Tex., was recently horsewhipped by a young lady because he was so unpleasant.—A doctor living in Amsterdam, Mo., has been threatened with tar and feathers if he doesn't leave the town. This just at the beginning of the cold season.—Two doctors of Paris, Tex., had a fight, characterized by the local press as "bitter." One used a knife; but the other a fence rail. To the latter we should say, "*Ne sutor ultra crepidam.*"—A doctor in Petrona, Ind., was shot by one of his patients, because he, the doctor, would—or would not—(the account is vague) give the patient a hypodermic injection. The gun is sometimes mightier than the hypodermic. — The South-African press advertises that there is a good opening for "a sober, steady, and handsome bachelor doctor" in one of the Transvaal towns. Send photo. This news is likely to cause a flutter among the younger members of the Academy of Medicine.—*Medical Record.*

Read this JOURNAL and mention it in your correspondence with advertisers.

ANALGESIA AND SEDATION.

By John J. Sullivan, M.D.

UNIVERSITY OF THE CITY OF NEW YORK.

On account of the frequency with which pneumonia in late years is accompanied with grippal symptoms, the treatment, to a great extent, has been modified or changed. The essential features in the result desired are a diminution of the pain and a lowering of the temperature. Opinions differ as to whether a reduction of the temperature influences the course of the disease, but a concensus of opinion is that *antipyretic* treatment is distinctly called for in the beginning, and an analgesic at all times, if needed to assuage suffering. *The antipyretic should be antikamnia, and the analgesic is supplied by codeine and antikamnia together.* This is given every three or four hours in tablets containing $4\frac{3}{4}$ grains antikamnia and $\frac{1}{4}$ grain codeine, throughout the period of congestion and consolidation. Where there is great restlessness, this will have a delightful effect.

In the nocturnal pains of syphilis, in the grinding pains which precede labor, and the uterine contractions which often lead to abortion in tic-douleureux, brachialgia, cardialgia, gastralgia, hepatalgia, nephralgia and dysmenorrhœa, immediate relief is afforded by the use of this combination, and the relief is not merely temporary and palliative, but in very many cases curative.

In the neuroses of the respiratory organs, great relief is afforded by the use of this combination. A paroxysm of asthma is often cut short by a full dose; hay-fever or autumnal catarrh is benefited by its use.

In the harassing cough of phthisis, or in the pain of pleuritis, in the painful sensations accompanying bronchitis when the tubes are dry and irritable—as they usually are—the blending of codeine and antikamnia will not be found wanting in its action, but will give results that are gratifying to both the patient and the medical attendant. As a producer of sleep it will be found efficacious. This is doubly true when there is great nervous excitement.

In pulmonary diseases this combination is worthy of trial. It is a sedative to the respiratory centers in both acute and chronic disorders of the lungs. Cough in the vast majority of cases is promptly and lastingly decreased and often entirely suppressed. In diseases of the respiratory organs, pain and cough are the symptoms which especially call for something to relieve; this tablet does it, and in addition controls the violent movements accompanying the cough, and which are so distressing.

This combination is the remedy for diabetes and is superior to any other in diminishing the quantity of sugar in the urine, and also in diminishing the quantity of urine itself in diabetes mellitus. The bulimia and polydipsia are lessened by its use, and probably the changes in the nervous system which accompany or are causative of the disease, are arrested or prevented. It also prevents waste. It controls restlessness; it relieves insomnia; it relieves distressing nervous symptoms. It relieves the craving of the stomach, and lessens the frequency of the calls to urinate.

It is not claimed that the combination will cure diabetes mellitus, but there will be, in many cases, arrest of the disease, with prolonged periods of good health, and cure in some cases.

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Original Communications.

PREVENTIVE MEDICINE.*

BY JOHN C. RODMAN, M.D., Washington, N. C.

Since the time of Hippocrates who is justly termed the "Father of Medicine" as differentiated from empiricism, for before his era quackery reigned supreme, men have labored with unceasing diligence toward the mitigation of human suffering and the preservation of health and life. But not until a few years ago have they come fully to realise the wealth in that golden adage, "an ounce of prevention is worth a pound of cure," and thereby directed their efforts toward the preservation of life by the prevention of disease. When the public as well as the physicians, fully realize this and understand the principles which underlie preventive medicine, then and not until then, can that ideal in medicine be attained to which every true physician aspires. Then no longer will we read in the daily press of the cholera plague with its thousands of victims, which is even now ravaging and depopulating the Eastern countries; nor of ship-fever (typhus fever), which in times gone by has left ships in mid ocean with their sails flapping mournfully in the wind and not a hand to guide them o'er the perils of the deep.

> "With heavy thump, a lifeless lump,
> They drop down, one by one."

Men who are now eminent in the medical profession have prophesied that, in the future the duties and labors of physicians will be more preventive than curative of disease, and so, live, active physicians of to-day to be up with the times, should be as well informed on the theory and practice of the prevention of disease as its cure; for it is our duty as physicians, entrusted as we are with the welfare of our people, to give to them that knowledge of sanitary science which is requisite to a proper understanding of self-protection and self-preservation.

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*Read before the Health Conference at Washington, N. C., November 6, 1895.

And ladies and gentlemen, that is why this Honorable Board has seen fit in its wisdom to select Washington as its place of meeting, to teach and impress on us the importance of the prevention of disease, and in the name of the city I thank them, hoping that the seed which they have sown will bear abundant fruit, and when the "Angel of Death" gathers His harvest it will be ripe and ready for the sickle.

What is sanitary science? "It is a science which includes a consideration of all that can be done to promote public health." It is a science of which it is just as important for the public generally as the physician to have a thorough knowledge, as they are the most interested, even though they may not realize it. But as the physicians constitute a part of the public and at this day, quite a large part of it, and because of their more thorough knowledge of sanitary science, which science is essentially the very foundation of their profession, and being philanthropists from the nature of their calling, it behooves them to promulgate their knowledge for the public weal.

Can diseases be prevented? Let us take a birds-eye view of ancient history and glance at *leprosy*, that dread disease which is spoken of so much in the Bible as synonomous with all that is corrupt, foul and loathsome. There was a time when the eastern continent was covered with lepers, there being nineteen thousand leper hospitals in Europe alone. Lepers were compelled to wear a uniform or some special mark of dress, designating them as the "unclean" and were refused entrance in all churches and public places,—cast into "outer darkness" as it were. What a fearful condition! To-day the disease is a very rare one. This condition has been brought about by a better knowledge of sanitary laws, protection of the non-affected by isolation of the affected.

Smallpox. Though few of the younger generation have ever seen cases of this dire malady, yet I venture to say that not one in the sound of my voice but has seen and recognized its ravages by the marks and scars left on the face of some relative, friend or acquaintance, marring forever that countenance made in His own image. This disease, a most fatal one, the mortality rate being in a ratio of one to three or four, has held sway in epidemics and numbered its victims by the thousands.

No age, no condition in life is exempt; from the unborn child to the old man, with the snows of eighty winters upon his head and just tottering this side of the grave, all, all, may be victims. But we should thank God that through the labors of the immortal Jenner, the discoverer of vaccination, who has probably saved more lives than any other man that ever lived and whose name shall be echoed down the annals of time by the thanks of millions yet to be, all this has changed, and now smallpox is a rare disease and scarcely ever epidemic. A triumph of preventive medicine.

New let us look at a disease with which we are all more familiar.

Typhoid Fever. A disease much more prevelant in North Carolina than many suppose, having been reported by the North Carolina Health Bulletin as occurring in fifty-six counties in the State during the month of August last. The consensus of opinion is, and I think it has been proven beyond all peradventure, that the origin of this disease is from a germ known as the thphoid bacillus, which finds lodgment in the small intestine and there reproduces itself in countless multitudes and passing out with the discharges are scattered to the four corners of the earth unless otherwise willed by some disciple of sanitation. This germ gains entrance to the body in a majority of instances through the stomach, most usually in such vehicles as drinking water and milk, though in some instances it may gain entrance through the lungs by inhalation. Now if this be true and few deny it, viz:—that the germ is the cause of the disease and it has to gain entrance to the body through the channels which I have designated, before producing the disease, then surely the remedy is plain—remove the cause—destroy the germ. To show how this disease may be communicated, let me refer to the often cited Plymouth Pennsylvania epidemic, in which the discharges from one patient, not in the town, contaminating the general water supply (there being no fever in the town at the time) produced a thousand cases and over a hundred deaths. Among the inhabitants of the town a certain portion used water from cisterns and wells and among these not a single case of fever developed, but was confined to those who used water from the general supply, which was contaminated with the bacillus typhosus.

Now if the attendants of this first case had only known a few simple laws of sanitation and carried them out, how many lives might have been saved, how much suffering averted. In a case of typhoid fever it is our duty morally and legally, to disinfect all discharges emenating from the patient by a method prescribed by law, which method it is the duty of the attending physician to carefully explain to the attending friends of the patient and to see that it is faithfully carried out, a failure of which constitutes a misdemeanor.

Again we have another safeguard. No living germ can withstand a moist heat above boiling point for any length of time, therefore if we have any suspicion that our water or milk supply is contaminated, it should be boiled before using, which process effectually removes all danger of infection from that source. Now then I do not mean to say that typhoid fever as yet can be entirely eradicated and swept off the face of the earth but this I do say, that the history of many towns whose mortality stastistics have been accurately kept shows that improved systems of sewerage and water supply, together with a better knowledge of sanitary laws by the public, have to a very marked degree reduced the mortality from this disease by prevention of the same.

There has been quite recently a revolution in the treatment of *Diphtheria.* The old time curative method which gave us a mortality rate of 50 to 60 per cent., has been changed to one which is both preventive and curative with a mortality of frem 5 to 20 per cent. By this new method which consists of a hypodermic injection of an agent, "diphtheria anti-toxine," so called, not only do we attempt to cure the disease but to immunize the patient, that is, to prevent the patient from contracting the disease, or after contraction, if seen early enough, to moderate and shorten the course of the attack. So we see that the trend in this most recent discovery is toward the prevention as well as the cure. How valuable this may be in times of epidemic the future only will disclose. After a case occurs, then what most interests us otherwise than the cure of the individual patient, is the limitation of the disease. This is only accomplished by the strict observance of sanitary rules and regulations, and what is said of diphtheria is equally true of *scarlet fever,* viz:—the complete isolation of the patient and disinfection of all discharges.

The contagium of these diseases cling to all articles with great persistency and retains its virulency for a long time. Well do I remember a case illustrating this point related to the class of Bellevue Medical college, by Professor Janeway. A child in a family of several contracted scarlet fever; the patient was promptly isolated and every precaution taken. During its convalescence it played with a toy wool dog. After recovery of the child the family moved to Florida, carrying with them nothing that had been in contact with the child or been in the room during its illness except by mistake, this toy. On their arrival it was given to one of the children to play with, in twenty-four hours the child sickened with scarlet fever and died. After a stay of two months the family moved back to New York and all unsuspectingly carried the little wool dog with them little dreaming of the deadly germ it contained, and again it was used as a play-thing. Thirty-six hours after its exposure another child sickened with scarlet fever and died. After careful inquiry by the attending physician the toy was suspected and promptly assigned to the flames with the result that no more scarlet fever occurred in that household, but alas! too late, the dread destroyer had claimed two more victims

This shows the importance of destroying all things not too valuable that have come in contact with these eminently contagious diseases. If too valuable, then they should be thoroughly disinfected with some powerful germicide. We cannot be too careful in these things, for upon this principle depends the lives of many.

The title which I have chosen for this paper covers such a broad field that I have not gone into details as fully as I might wish, but in conclusion let me impress upon you that there are certain diseases in the category of human ailments which "Octopus-like," reaches out with its many arms and grasps all grades of society. from the pauper to the millionair, for if one is effected the other is in danger. Microbes are no respecter of persons. And so we all, both laymen and professional, are bound together by one common tie for the attainment of that grand and glorious object, the preservation of life by the prevention of disease.

DIAGNOSIS AND MEDICAL TREATMENT OF INTESTINAL OBSTRUCTION.*

By R. F. Williams, M.D., Richmond, Va.

General Symptoms: In the *chronic* forms ot intestinal obstruction, the first symptom noticed, is some desturbance of defecation. Usually, this is constipation which has gradually increased, and which is often accompanied by tenesmus and pain. There may be diarrhœa, with bloody mucus stools, or constipation alternating with diarrhœa produced by irritation of old fæcal matter or passive hyperæmia. If there be a change of form in the fæces, they will usually be flat and ribbon like; the appearance of pea-like lumps in the stool, like the fæces of a goat, is not diagnostic of obstruction, as the same occurs in other forms of constipation. There is a gradually increasing meteorism. Peristaltic movements of the gut may be seen through the abdominal wall as this is thin from the general emaciation of the patient, and the gut wall is hypertrophied. Some outhors have recommended this as a more or less efficient means of diagnosing the site of the obstruction; but, on account of the mobility of the gut and its frequent change of position, it is of doubtful value for this purpose. Aortic pulsations may sometimes be felt transmitted through the distended gut.

Vomiting is a frequent symptom as the trouble advances, but it is rarely fæcal.

Pain, colicky in character, is a usual symptom; although cases are recorded as proceeding without pain until complete occlusion. More or less anæmia and emaciation are present and may be severe in such cases caused by carcinoma and tuberculosis. The chronic form may follow on the subsidence of an acute attack, but it is more common for an acute attack to supervene in the course of the chronic trouble.

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*Read before the Richmond Acadamy of Medicine and Surgery, October 22, 2895.

The symptoms of acute intestinal obstruction are sudden pain in the abdomen, at first colicky but becoming continuous, usually with exacerbations. The abdomen is tender and distended to a great or moderate degree according to the site of the obstruction; but there is no flatulence, and constipation is absolute except is intussusception, and in some instances, when fæcal matter below the seat of obstruction may be voi ed.

Vomiting is a constant symptom, sometimes alternating with eructations. In the beginning of the trouble, the contents of the stomach are first vomited, then bile and later, stercoracous matter. This is not produced by a reverse peristalsis bringing the contents of the large gut into the stomach, but by putrid decomposition in the small gut, as is shown by the fact that in obstruction of the small gut stercoraceous vomiting occurs and is a more constant symptom in this form than in obstruction of the large gut. The vomiting is caused by stretching of the peritoneum and by irritation of the stomach produced in the presence of abnormal matter which has entered when the plyorus is relaxed by pressure from within the gut.

There are rapidly developing symptoms of collapse. The pulse rapidly increases in frequency and becomes weak; the extremities cool and cyanatic; the eyes and cheeks sunken; the voice weak. The temperature is variable though it usually falls. The tongue is dry and there is great thirst. The urine is scant and high colored and may even be suppressed when the obstruction is high, due, probably, to the constant vomiting and consequent small amount of fluid absorbed. Respiration may be interfered with by the distension and pain. Peristaltic movements may be seen through the abdominal walls; but this is not a constant symptom on account of paresis of the gut wall, thick abdominal walls, etc.

The *diagnosis* of intestinal obstruction is always difficult and cannot be dogmatically given; as it must be made by differences in degree of symptoms for the most part; and perhaps more than in any other condition, is the judgment of the physician called in here.

Diagnosis as to the site of the obstruction:—Abdominal inspection and palpation give indications of the location by the detection of well-defined masses or active peristalsis in the distended coils. Rectal and vaginal examinations should always be made, as by these means, the condition of the pelvic organs can be discovered and often, if the obstruction be low, it can be felt; while, if high, the fingers will find the empty coils depending into the pelvis. Rectal examination with the whole hand is not to be recommended. Obstruction of the small gut gives rise to greater anuria and there is, usually, an increased amount of indican in the urine due to decomposition of albuminous matter, forming indol; while, if the obstruction be in the large intestine, indican is not increased as the albuminous substances are not present there in such quantity.

In obstruction of the small gut, there is greater vomiting which becomes stercoraceous early, and less tympanites, the distension being in the upper part of the abdomen if the duodenum of jejunum is the site of the obstruction, and in the central part, if the ileum be involved. Professor Monti, of Vienna, gives as a diagnostic point pain beginning about the umbilicus and radiating toward the stomach when the duodenum or jejunum is the site; while if the obstruction be lower down, pain begins in the cœcal regions. He also considers the development of tympanitis of diagnostic value if the case be seen early enough.

In obstruction of the large gut, there is greater tympanitis and vomiting comes on more slowly. Tenesmus and the passage of mucus and blood are commoner. For deciding the point of obstruction in the large intestine, rectal examination will give evidence of the involvement of the rectum, and often, of the sigmoid flexure. Inflation with a bellows, or with bicarbonate sodium and tartaric acid is a useful means. Knowing the capacity of the larger gut to be about six quarts, distension of the gut by the injection of known quantities of water, will frequently aid in the diagnosis. For this purpose, only a soft rubber tube should be used on account of the danger by hard one. The patient should be anæsthetized and have his buttocks raised. In both of these last mentioned means care must be used, as cases are on record where such methods have caused rupture. To further aid the diagnosis by this method, auscultation along the course of the large gut should be made as the gurgling sound will give further evidence.

Of the Nature of the Obstruction:—Hernia should be excluded by a thorough examination of all possible points for its occurrence. *Strangulation* is rare in the young. The history usually gives evidence of previous obdominal operations, peritonitis or colic. The attack comes on suddenly, fæcal vomiting occurs early; local tenderness is usually absent at first, but comes on later; constipation is absolute; fever may, or may not be present. No tumor can be felt, as a rule.

Intussusception is commonly met with in children, occurring even in young infants. The result is sudden. Pain, at first, is usually paroxysmal, and tenderness is often absent, pressure often giving relief. Fæcal vomiting is not a common symptom. Constipation is not the rule, but if the invagination occur in the small gut, it may exist, when there will usually be more hemorrhage. Usually, there are bloody stools, the amount of blood often reaching a severe degree of hemorrhage. There may even be diarrhœa. Tenesmus is a frequent symptom, especially when the large gut is involved. If the affection be in the large gut, by rectal examination one may often touch the invaginated portion feeling like a softened, patulous cervix. The presence of a sausage-shaped tumor can usually be found by abdominal palpation.

Volvulus occurs oftenest in men of middle and advanced life. The diagnosis is always difficult, and often laparatomy is the only means of making it. The usual sites are the lower part of the ileum and, most frequently, the sigmoid flexure. The onset is sudden. Pain is at first, intermittent, becoming constant later. Tympanitis is marked, beginning frequently as a circumscribed area in the umbilical and epigastric regions and tending to the left side. Constipation is absolute, and peritonitis appears early. The passage of a soft rubber tube and injection of water, is especially useful for diagnosis in this form of obstruction, though some object that it increases the trouble.

Fæcal Impaction occurs most frequently in women and lunatics. There is always a previous constipation which, as a rule, gradually increases till the point of occlusion is reached; but the occlusion may be sudden. The commonest sites are the cœcum and rectum. Constipation is usually, absolute, but, when the impaction occurs in the rectum, the mass may be channelled, allowing the passage of fæces from above, and the patient, for a long time, be ignorant of any trouble. There is no blood in such actions. Eructation is a common and, often, distressing accompaniment of fæcal impaction, but vomiting does not occur till late, and is very rarely stercoraceous. Pain and tympanitis are also late symptoms. A tumor—which puts on pressure, can usually be felt by abdominal palpation, and, if the rectum be the site, the trouble can be diagnosed by digital examination.

In impaction by gall stones, there is usually, a history of previous colics, and fæcal vomiting, and pain occur early. Jaundice is not often met with and a tumor is rarely found. Constriction is diagnosed, by a history of previous dysentery, syphilis, tuberculosis, typhoid, etc., in addition to the general symptoms of the chronic form of the trouble.

Obstruction due to paralysis of the gut wall from traumatism or other cause is usually accompanied by paralysis of other parts; and is diagnosed by the history of such paralysis.

The *course* of the affection is variable—in acute cases ending in a few hours or extending over a week or two, about six weeks is the usual period. In chronic cases, the duration depends upon the cause. The *prognosis* is always grave, most cases ending fatally. In some cases, there is a possibility of spontaneous recovery, as when in intussusception the gangrenous portion is passed. One reason, probably. of the great fatality, is the long delayed surgical treatment. *Treatment* for the relief of intestinal obstruction, has been attempted in many ways—bullets in the sixteenth century, shot more recently; metallic mercury, purgatives, opiates, enemata, electricity, massage and laparatomy—as the result of experience, it is now conceded that in most cases, it is a waste of time to attempt alleviation by means of medical treatment and that as soon as diagnosis had been made, operative treatment should begin. Purgatives should not be used, but in the early stages the administration of opium greatly relieves pain by checking peristalsis. It also lessens the vomiting, but it must be borne in mind that it obscures the symptoms. Enemeta should be tried early, except, perhaps, in volvulus; although in most cases, little good may be expected. When these have been used, and the water returns unchanged, the vomiting continuing, operation is indicated. Washing out the stomach is useful in relieving nausea and lessening the tension of the bowel. In some cases, it has even proved curative.

For the relief of tympanitis, puncture of the gut through the abdominal wall with a trocar and camula, has been advised, but it is unsatisfactory, as, on account of the mobility of the gut, the portion below the obstruction may be punctured and there may result a septic peritonitis from failure of the gut walls is close perfectly. For this purpose, turpentine stupes may be tried, but are insufficient.

Mr. Jonathan Hutchinson, in the *Report of the British Medical Association's* meeting in 1893, advocates taxis for acute intestinal obstruction, claiming that in most cases, his results were excellent, whereas he knew of only one case cured by laparotomy. This method is, having anæsthetized the patient, to invert, and then, to forcibly push and shake the intestines from side to side, large enemata being given while the patient is inverted. Then the patient is to be thoroughly shaken by four strong men, first in the inverted position, then in the erect. In some caees, he saw no immediate results, but in an hour or two, the bowels moved, and all went well.

In the acute affection the food should not be administered by mouth, but only as nutrient enemata, otherwise, it is immediately vomited and adds to the patients discomfort.

Medical treatment is often efficacious and sufficient in two forms—intussusception and fæcal impaction. Opium should be given in both cases, as it relieves the pain and vomiting, and in case of intussusception, prevents further invagination. Enemata should be fully used. In intussusception, the patient should be put in the knee-chest position, and a soft rubber tube inserted, water being slowly injected, the nurse pressing the buttocks together to prevent its escape. In fæcal impaction, continuous enemata for half an hour at a time, should be employed. These may be of soap water, oil, or turpentine and oil in the proportion of one ounce to the pint. Inflation with a bellows may be employed in cases of intussusception, instead of the injections of water, but care must be observed. The stomach should be washed in both cases, as it relieves vomiting and tension, and preventes the absorption of noxious matter. It has also proved curative.

For cases caused by paralysis, electricity and massage may be of benefit.

If relief is not speedily accomplished by measures indicated, operation should be performed.

DISCUSSION.

Dr. Geo. Ben. Johnston wishes to emphasize one point in the paper—that concerning fæcal impactions. It is frequently overlooked; the symptoms being so obscure and misleading. The most common cause of fæcal impaction is prolonged sojourn in bed whether due to disease or operation. This is debilitating, and in these cases, there is also absence of irritating food. Usually, there is no complaint of constipation, but of diarrhoea, when continued, it is usually followed by tenemus, pressure on the uterus in the female, on the bladder in the mail. Later in the course of the obstruction, there is a feeling of something in the bowel, and tenesmus becomes distressful. One is apt to administer astringents; but the most superficial examination reveals the presence of a mass which is found very low in the rectum, the finger coming into contact almost immediately. Purgatives not only are of no benefit, but do harm; enemata are unsatisfactory. Excavation with the finger is the only satisfactory method of relieving. If necessary, the patient may be anaesthetized. One hand must press above the sigmoid flexure. Follow the operation by an enema of water and oil. Dr. Johnston says his routine, when winding up a case that has been a long time in bed, is to make an examination as described, and he often finds impaction. He reported the following case, seen in consultation with Dr. Warriner. Girl, age 13, anaemic suffering from complete constipation for five or six days. Paroxysmal pains, tenesmus, mucus evacuations, persistent nausea, stercoraceous vomiting, emaciation marked, pulse and respiration increased. She suffered from insomnia and restlessness, was extremely nervous and unable to take food. Upon superficial examination, both he and Dr. Warriner diagnosed intussusception. A careful examination revealed a sausage-like tumor across the umbilicus, confirming their diagnosis. Laparatomy was determined upon, and while preparing for it, the child dozed. It was noticed while she slept, she would pluck a hair from her head, roll it into a little ball, put in her mouth and swallowed it. The mother said this was a habit. Doubtless, she had done it for years. So convinced, said the doctor, that the obstruction was due to a balus of hair that he did not operate. The tumor was situated in the transverse colon at this time. High injections of tepid water and epsom salt were begun. The first came back unstained; a repetition was colored. It was determined to continue the injections at intervals of two or three hours. In the meantime, sustaining treatment was prescribed. The following day, the staining was increased in amount. This convinced the doctors that the obstruction was not due to intussusception, but impaction, which had moved to the splenic fluxure. The general condition was improved; nausea and vomiting had subsided; sleep was more peaceful and food was retained. That night there came away a bolus of hair six inches long, three inches in circumference, and coated with hard fæcal matter. Two years afterward, the child was treated for threatened obstruction. Copious injections of castor oil brought away the bolus.

Dr. J. W. Henson reported a case of obstruction in a girl of 14 years. She had typhoid, and on the twenty-first day, there was intestinal hemorrhage. He was afraid to give purgatives. For two weeks from the time of hemorrhage, fever continued. However, in a few days, there were frequent passages of masses as large as a fist. Oil was then administered, and the character of the operations remained the same for three days. The oil was then stopped and improvement followed rapidly.

Dr. J. A. Hodges said he listened to the paper with interest; that it covered well the whole ground, but there was one remedy to which no reference was made. Belladonna pushed till its physiological action is manifest, is indicated in any kind of obstruction. In one case, operation was about to be performed when the belladonna, which had been administered previously, produced a movement. Enemata, said the doctor, are never properly administered except by the physician himself. They should always be used before operation is decided upon. The best is of kereosene oil of which he has used as much as a pint at a time. It is a lubricant and irritant. During the injections, the buttocks are held up for half an hour if need be, and it is wonderful to find how far the oil penetrates. If there is no tympanitis, taxis or massage may be employed to hasten its action. In the case of a brakeman who had no diarrhœa there occurred white attending to his duties, a sudden pain like that of hernia; but on examination nothing much was found. An enema brought nothing; when a coal-oil enema produced a small movement. On opening the abdomen, a commencing hermia was found. The strangulation was removed and the patient recovered. Soon after, ob struction recurred. This time, the oil gave relief. The doctor has never observed any bad effect from the oil.

Dr. W. W. Parker reported two cases of impaction, both in aged women, both requiring two days for their removal. One began in October and was not removed till the February following. In making post-mortems, the doctor had often found scybalae where they were never suspected.

Dr. Henson reported that in the case of a girl of 7 years, he had used for five days purgatives and enemata without result. The contents of the abdomen could be felt, but no lumps were revealed. It was decided to remove her to the hospital for operation. Before doing so, belladonna was administered and the operation deferred, and for two days the use of the drug was contined producing movements which become regular. Enemata were also continued.

The President: Experiments show that the carbonate of sodium dissolves scybalae. The hint is worth remembering. Alkaline remedies are solvents and there is no reason why they should not be given for that action by the mouth. They act on the centre and sides of the mass at the same time.

Dr. J. S. Wellford finds enemata of strong solutions of salt very efficacious. He follows this administration by salts, senna and manna. He thinks we err in giving the solid extracts as they are of small bulk.

Dr. Edwards thinks ox gall injections efficacious. It acts better than all other remedies, combining a natural purgative and solvent. He uses a bladder for each injection.

Selected Papers.

IODOFORM-OINTMENT INJECTIONS IN THE TREATMENT OF SUPPURATIVE ADENITIS OF THE GROIN.

By James R. Hayden, M.D.

The chief objects to be obtained in the treatment of suppurating inguinal buboes are their rapid disappearance, an amelioration of pain, and the absence of a compromising scar in the groin.

To this end various surgical procedures have been suggested from time to time, but it was not until 1856, when Broca, Roux, Marchal, Abeille, and others advocated aspiration of the pus and injection of diluted tincture of iodine into the abscess cavity, that such favorable results were in a degree obtained.

1857 Lebert reported a number of successful cases treated in a similar manner, except that he evacuated the pus through a small incision and injected the pure tincture of iodine.

Again, in 1861, Teackle, speaks of this method as being remarkably successful, and quotes several cases in which he has employed it.

Scott Helm, in 1886, was, I believe, the first to substitute iodoform for tincture of iodine, and used it in the following manner:

The parts were cleansed and anæsthetized by means of ether spray, the pus was drawn off with a hypodermic, and the abscess cavity washed out with a weak solution of carbolic acid. Iodoform suspended in glycerin was then injected, the needle withdrawn and the puncture closed with collodion; over this an ordinary dressing and spica bandage were applied. Twenty-one cases were treated in this manner with but one failure.

Later, Helm substituted oleic acid for glycerin, and finally iodol for iodoform.

In 1889, Von Eichstoff reported a series of cases treated by injections of iodoform and ether which he employed in two different ways as follows:

First method. The pus was withdrawn and the cavity irrigated with boric acid solution, and then injected with the iodoform and ether mixture, the puncture being covered with an ordinary dressing, which was left in place for three days. In some cases he had to make a second injection, but never a third. A cure was accomplished in from three to eight days.

Second method. The parts were cleansed and the iodoform-ether mixture injected directly into the abscess cavity without evacuating the pus. As a rule, two injections had to be employed before a cure was accomplished, which on an average took about twelve days.

In the same year Fontan described very minutely the treatment of suppurating buboes by injections of iodoform vaseline. He gives a total of forty-one cases so treated, the average time for cure being six to seven days. His method of procedure is as follows: The parts are shaved and cleaned; the bubo opened with a lancet and all the pus forced out; the abscess sac is then irrigated with diluted Van Swieten's fluid, and iodoform-vaseline injected with a glass syringe, previously warmed in hot water. A cold wet dressing is applied in order to congeal the ointment at the opening. In some cases it was necessary to resort to an injection a second time.

In 1893, W. K. Otis reported very favorable results in sixteen cases in which he used injections of iodoform ointment in a similar manner.

Having employed this plan of treatment with such satisfactory results, I feel justified in reporting the few cases so operated on; these were not selected, but taken at random as they entered the hospital and clinic. The steps in the procedure are similar to those advocated by Fontan, with the addition of the peroxide of hydrogen, and are as follows:

1. The operative field is shaved and rendered surgically clean in the usual manner.
2. A few drops of a 4 per cent. solution of cocaine are injected beneath the skin where the puncture is to be made.
3. A straight sharp-pointed bistoury is then thrust well into the most prominent part of the tumor until pus flows.
4. All of the pus is forced out through this opening by firm but gentle pressure, as this procedure is, as a rule, very painful.
5. The abscess cavity is irrigated with pure peroxide of hydrogen until it returns particularly clear.
6. It is then irrigated with 1:5000 bichloride of mercury solution, all of which is carefully squeezed out.
7. The now thoroughly cleansed abscess cavity is completely filled, but not painfully distended, with 10 per cent. iodoform ointment by means of an ordinary conical glass syringe, previously warmed in hot water.
8. A cold wet bichloride dressing is applied with a fairly firm spica bandage, the cold congealing the ointment at the wound, and thus preventing its escape into the dressing.

The patient should be kept very quiet for the first twenty-four to forty-eight hours, rest in bed being preferable, although not absolutely necessary.

The dressing is removed at the end of the third or fourth day and the parts examined; if pus has reaccumulated or the ointment escaped into the dressing, a second injection may be made. If, on the other hand, all looks well, the first dressing is replaced by a gauze pad and spica bandage, and the patient told to report in two or three days for examination.

In a few of the above series of cases several drops of an oily serous fluid were observed at the first dressing escaping from the puncture; this fluid was carefully wiped off and a sterilized gauze dressing applied, recovery being in no way retarded by the exudation.

The following table gives the etiology, amount of pus evacuated, number of injections employed, and time for cure in each case:

Case.	Etiology.	Amount of pus.	Number of Injections.	Result.
1	Gonorrhœa: chancroids . .	12 drachms.	One.	Cure in 14 days.
2	Gonorrhœa	4 "	One.	" 10 "
3	Chancroids	12 "	One.	" 14 "
4	Chancroids	3 "	Two.	" 7 "
5	Gonorrhœa	6 "	One.	" 14 "
6	Chancre: chancroids . . .	11 "	One.	" 7 "
7	Chancroid	4 ounces.	One.	" 21 "
8	Chancre: chancroid . . .	2 "	Two.	" 21 "
9	Chancroids	12 drachms.	One.	" 7 "
10	Chancroid	6 "	One.	" 14 "
11	Gonorrhœa	6 "	One.	" 8 "
12	Gonorrhœa	4 "	One.	" 10 "
13	Chancroid	3 "	One.	" 11 "
14	Gonorrhœa: chancroid . .	5 "	One.	" 12 "
15	Gonorrhœa	12 "	One.	" 12 "

Suppurative action and pain ceased after one injection of the iodoform ointment, except in two cases; in these the injection had to be repeated on account of a slight reaccumulation of pus.

None of the above cases were pronounced cured until firm pressure in the groin elicited neither pain nor fluctuation, and the overlying skin had resumed its normal appearance.

In order to secure the most favorable results from this method, it should only be employed when the glands are quite thoroughly broken down, so that the iodoform may come in direct contact with all of the infected tissues.

It is not, of course claimed that this method will succeed in every case of suppurative adenitis, but its many advantages over the more radical procedure render it, in my judgment, worthy of a trial. There is no necessity for the patient to remain in bed, or undergo anæsthesia; the little scar in the groin is soon covered by hair, and he or she is spared a more or less painful and tedious convalescence. If after one, two, or even three injections, this method fails to produce the desired result, an incision may then be made and the contents of the bubo removed; the previous treatment not having interfered in any way with this operation.

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Editorial.

Closing Year Thoughts.

With the present issue the JOURNAL closes its eighteenth year of existence and its first as a semi-monthly, When, a year ago, we began to issue the JOURNAL twice a month instead of once, we were not altogether without fear that this innovation on the part of a Southern journal might not meet with all the encouragement we felt the move deserved, and we considered it therefore more of an experiment than an established thing. The increased expense, including the addition of some one hundred and fifty pages of reading matter, was considerable, but was incurred without any increase in the subscription price, We felt, however, that even if the additional subscription and advertising patronge did not neutralize the increased expenses, the satisfaction to ourselves and our readers would alone be worth the cost.

The experience of the past year has satisfied us that the move was a wise one. Increased subscription and advertising patronage have shown that our efforts have been appreciated, and the JOURNAL may be considered to have taken a permanent position among the more progressive journals of the country. As in the past, so in the future we will have the interests of our readers and advertisers constantly in mind, and will be ready at all times to make such additions and improvements as will be for their benefit. Nor will we be unmindful of the duty we owe to the State Society, but will use our best efforts to maintain its dignity and promote its welfare. In this we hope to receive the support of every member of the Society and we believe we will not be disappointed. Let matters which affect the interests of the Society be talked over in the pages of the JOURNAL, which will always be at the service of any member who may have ideas to advance. The JOURNAL is proud of the distinction of being the official organ of the Society, and would gladly be more useful to the Society than it has been. Let the members air their opinions as freely as they desire. Good will follow.

In closing the year we most sincerely thank those kind friends who have had words of approval and encouragement to offer us from time to time. Such evidences of friendship do much to lighten the tasks and smooth the paths of him who would do his duty conscientiously and are heartily appreciated. We do not forget that this number of the JOURNAL will reach you on the eve of the great Christian Festival, and we extend to our readers, one and all, our best wishes for their health, happiness and good cheer.

A Merry Christmas to you all!

Reviews and Book Notices.

The Bulletin of the American Academy of Medicine for December 1895, is devoted entirely to the subject of State Boards of Medical Examiners. Besides other interesting matter it gives a complete classification of the States with their various requirements for practice. This is a valuable number to be in the possession of all physicians. The *Bulletin* is published tri-monthly at $3.00 a year.

Memoranda. E. B. Treat, publisher, New York, has in press for early publication the 1896 *International Medical Annual*, being the fourteenth yearly issue of this eminently useful work. Since the first issue of this one volume reference work, each year has witnessed marked improvements; and the prospectus of the forthcoming volume gives promise that it will surpass any of its predecessors. It will be the conjoint authorship of forty distinguished specialists, selected from the most eminent physicians and surgeons of America, England and the Continent. It will contain reports of the progress of Medical Science at home and abroad, together with a large number of original articles and reviews on subjects with which the several authors are especially associated. In short, the design of the book is, while not neglecting the Specialist, to bring the General Practitioner into direct communication with those who are advancing the Science of Medicine, so he may be furnished with all that is worthy of preservation, as reliable aids in his daily work. Illustrations in black and colors will be consistently used wherever helpful in elucidating the text. Altogether it makes a most useful, if not absolutely indispensible, investment for the Medical practitioner. The price will remain the same as previous issues $2.75.

The Pathology and Surgical Treatment of Tumors. By N. Senn, M.D., Ph.D.,LL.D., Professor of Practice of Surgery and Clinical Surgery, Rush Medical College; Professor of Surgery, Chicago Polyclinic; etc., etc. Illustrated by 515 engravings, including full-page colored plates. Royal octavo, 710 pages; cloth $6.00, one-half morocco $7.00; for sale by subscription only. W. B. Saunders, Philadelphia, 1895,

It is always with pleasure that we welcome anything from the pen of this distinguished American surgeon. In the volume under notice Dr. Senn has lost none of the logic, clearness and force that characterize his other writings, and the work will stand long as an authority on the special subject of which it treats.

There are few works devoted exclusively to this subject, and the text-books, even the more voluminous systems of surgery, allot to this part of surgical pathology too little space by far. The more inviting fields of bacteriology and surgical technique are given the greater share of attention, but none will deny the great importance of a more thorough and practical knowledge of the nature of tumors than is possessed by the average physician.

The first part of this treatise is devoted to a general consideration of tumors, and it is this part which is intended more especially for the use of students. He draws clearly the dividing line between tumors and inflammatory swellings. "That tumors should have been confounded with inflammatory swellings before the essential causes of the latter were discovered and understood is not strange, but that these entirely different pathological processes should not be separated sharply at the present time is inexcusable." The work throughout is dotted here and there with some of the author's axioms appearing in italics. In this part are studied the origin and nature of tumors, their anatomy and biology and etiology, clinical aspects of benign as distinguished from malignant, the transformation of benign into malignant, and the diagnosis and treatment.

Then follows the section on classification, the author basing his classification into epiblastic, mesoblastic and hypoblastic on the origin of the tumor from cells of one of these embryonal layers. Retention cysts, which the author defines as "a swelling due to the retention in a pre-existing space of a physiological secretion by obstruction of the outlet of a gland" are not considered as tumors, and are discussed in a different and separate section of the book.

After the section on classification each class is taken up and the tumors treated individually beginning with epithelioma and ending with sarcoma. Under each is studied the etiology, histogenesis, clinical history, prognosis and treatment. The topography of each is also given—the parts of the body which are more commonly affected by the different tumors. The various operations for the relief of benign and malignant tumors are fully described and illustrated, and all the indications and contra-indications carfully considered. The illustrations are unusually helpful and are well executed.

Abstracts.

CASTRATION FOR ENLARGED PROSTATE.—Morton (Phi lada. Polyclnic) reports a successful case of castration for hypertrophied prostate. The patient, aged 71 years, was suffering from total retention and hemorrhage resulting from an attempt of his phytician to pass a catheter. After drawing off the urine the prostate was found to be as large as an orange and exceedingly soft in consistency. Hemorrhage ceased after catheterization but recurred on each subsequent introduction of the instrument. The urine was black with decomposed blood, ammoniacal, and contained much pus and detritus. The difficulties attending the drawing off of the urine increased constantly until it become apparent that operative interference must be resorted to. The experimental nature of the operation was fully explained to the patient, and his consent in writing obtained. The operation was performed on August 28, 1895, and although catheterization had to be continued, bleeding ceased almost immediately after the operation and the urine began to clear up and become less decomposed. On August 30th it was entirely free from blood, pus and all other evidences of decomposition. On the second day after operation he began to pass a portion of his urine. This amount steadily increased until one week later there was no residual urine, and the use of the catheter was discontinued. The prostate, by this time, had become reduced to the size of a hen's egg, and to normal consistency. On the 29th of October he was again examined and found to be in excellent health. He was urinating from four to six times daily, had no distress whatever, and was passing normal urine.

TAKA-DIASTASE—Dr. F. Lascar (*Therapcestic Gazette*) lays especial stress on the importance of a proper action of the digestive organs. Any irregularity in the process of digestion very soon becomes manifest, and dyspepsia, malnutrition and ill health follow. Science has succeeded fairly well in supplying gastric and pancreatic ferments for the digestion of protcids and fats, but our success has so far been only a very partial one in supplying starch converting substances. That diastase has an identical action with ptyalin upon starch is well known and the diastase contained in malt has been employed for this purpose; but even in the best extracts of malt there is only a limited and varying amount of diastase, so that while malt will continue to play an important rôle as a dietetic agent, its utility as a starch converting agent must remain a limited one. The writer recalls an extract of malt which was shown him by Mr. Takamine, a Japanese chemist, at the Cotton Exposition at New Orleans several years ago. Under the discoveries of Mr. Takamine a prominent pharmaceutical firm of this country are manufacturing a diastase, which is known commercially as taka-diastase. This product is a dry powder, very perfect in its action in converting starch into maltose and dextrose. He attributes this superior potency to the avoidance of undue heat in its preparation, an error which he warned against in 1891 as heat impairs, and is liable to even totally destroy the diastatic action of malt extract. As a result of experiments he finds that taka-diastase wfll convert one hundred and fifty times its own weight of starch into a soluble state, and moreover that the action is almost instantaneous. The product of the converted starch is maltose. Taka-diastase is a dry powder, tasteless and of no perceptible odor, and will prove of value in the feeding of infants where it is desirable to give starchy foods.

The Treatment of Certain Cases of Insomnia.—In view of the large number of hypnotics in the materia medica it has become possible for the physician to strictly individualize in his selection of remedies of this kind. This is, however, attended with greater difficulties than in any other branch of therapeutics, for to select the proper hypnotic in any given case requires a careful investigation of the cause and nature of the insomnia. Any effort therefore to define more accurately the indications for the various hypnotics is worthy of more than ordinary attention. During the past ten years Drs. H. Breslauer and J. Joachim (Centralbl. f. d. ges. Therapie, August 1895) have made a thorough study of this subject and the following represents the outcome of their observations with regard to the therapeutic indications of trional; if employed in the proper manner they consider this drug as among the best and least injurious of hypnotics. Administered in doses of 1.0-1.5 gm. it produces a quiet sleep of six to eight hours duration, the awaking from which is not, as a rule, attended with disagreeable after effects. During its continued use the dose should not exceed 2.0 gm. and a large single dose acts more effectively than repeated smaller doses. It is best given in 50 to 100 gm. of boiling water with addition of syrup rub. Idaei, although it may also be administered in hot tea or hot lemonade. As trional is precipitated as soon as the fluid becomes cold, the latter should be taken as hot as possible. After being employed for four to six days, it should be discontinued for several days and during its prolonged administration it is advisable to let the patient drink 1 or 2 bottles of an albaline mineral water and to relieve constipation with enemata and laxatives. According to the experience of the above authors trional is an admirable hypnotic in cases of neurasthenic agrypnia, chronic dementia and periodical mania, while in paralysis, conditions of melancholic depression and paranoia attended with hallucinations it exerted a decided sedative influence even in fractional doses (0.5 gm.).

New and Original Method of Obtaining Material for Skin Grafting.—Dr. Zera J. Lusk (*Medical Record*, *Dec. 7*, *1895*) describes an original method of obtaining material for skin grafting and reports a case of very extensive burns recovering under the treatment. The man had fallen into a pan of boiling brine and the burns are thus described: Both arms were completely stripped of epithelium, which hung in shreds about the wrists having been scraped down in his efforts to get out of the pan. The thick calloused skin of the palmar surface of both hands was torn and in shreds. The dorsal surface was covered with sacks full of serum. There was a raw, bleeding surface six inches wide extending from the left arm to the middle of the right scapula; one of the same nature and size covered the lumbar region. The buttocks were covered with large blisters, but more superficially. The skin on the lower extremities hung in shreds, bleeding in many places, especially about the knee and ankle joints. There were numerous small vesicles on the face and neck and erythematous patches over the chest and abdomen. The case seemed hopeless until February 11th, about a month after the injury, when favorable symptoms appeared. He was extremely emaciated and nearly a fourth of his body was a granulating surface. The patient could not, and others would not supply material for grafts after Thiersch's method. One set of grafts were shaved from the horny skin on the hand of one of his companions, as recommended by Kibbler, but he refused to furnish a second supply. He then concluded to try grafts from the hard, dry epithelium which was left by the vesicles on the dorsum of the feet. It had been standing there, attached by one side to the foot, ever since the injury, about five weeks. A piece an inch square was softened and sterilized in warm boric-acid solution, divided into twelve grafts, and applied to the anterior granulating surface of the right thigh. Seven of the twelve grafts took, and rapidly developed into vigorous islands of skin. The subsequent treatment consisted in using this dried epithelial tissue, with the result that these large raw surfaces were covered with substantial skin by April 1st, about six weeks. The surface healed was nearly six hundred square inches.

He reports a second case in which a large leg ulcer was successfully grafted in one month by cuticle obtained from blisters produced by cantharides plaster. He notes the following observations: 1. The best results were obtained from the thin transparent epithelial tissue. It made no difference whether one or both edges were attached, just as satisfactory results followed the use of dried patches, with no attachment except at distal end of hairs. 2. The certainty of their attachment when properly applied, and rapid development. 3. The absence of cicatricial contraction, the skin being loose, and in many places, especially on back and thighs, so natural as to require close examination to discover its artificial nature.

SURGICAL SUGGESTIONS. *Syphilis of Larynx.*—An early diagnosis of syphilis of the larynx is important, as in this stage it can be satisfactorily treated, while neglected tertiary lesions are often incurable, except, perhaps, by radical surgical measures. —ANDERSON.

Examination of Virgines Intactæ.—The bimanual examination of *virginis intactæ* should always assume the form of a recto-abdominal palpation. There is no need in these cases of a vaginal examination; the finger in the rectum will teach us all we wish to know concerning uterus, tubes, and ovaries. The only difficulty to be overcome is to identify the cervix; a little practice will enable us to master this detail.—EDEBOHLS.

Intra-cranial Hemorrhage. — Intracranial hemorrhage is regarded as a very natural accident in Bright's disease, atheroma, and hemorrhagic pachymeningitis.

Tuberculous Iritis.—1. Tuberculous iritis must be distinguished from other varieties of iritis. 2. This form of iritis is premonitory of the appearance of tuberculous nodules elsewhere. 3. Its invasion is insidious, slow, and with but little local reaction, bnt is accompanied by numerous posterior synechiæ. 4. The absence of pathognomonic symptoms makes the diagnosis difficult. 5. The tendency to spontaneous healing of miliary tuberculosis of the iris depends upon the natural resistance of the iris tissue. The encapsulation of the tubercle and the rapid obliteration of its nutrient capillaries favor its isolation and the protection of the healthy tissues.—VIGNET.

Shock is a disturbance of the functions of the nervous system, induced suddenly by a violent stimulation made directly on the nerve-centres, or indirectly through the peripheral nerves, whereby the harmony of action of the great nervous centres, more especially of the sympathetic ganglia, and through them of the various organs of the body, becomes deranged. It is essentially a depression of nerve-force, and bears in effect the same relation to the nervous system as syncope to the vascular.—CONNERY.

Black Eye.—There is nothing to compare with the tincture or strong infusion of capsicum annuum mixed with an equal bulk of mucilage or gumarabic, and with the addition of a few drops of glycerine. This should be painted all over the bruised surface with a camel's-hair pencil and allowed to dry on, a second or third coating being applied as soon as the first is dry. If done as soon as the injury is inflicted, this treatment will invariably prevent blackening of the bruised tissue. The same remedy has no equal in rheumatic stiff neck.

Dislocation of Ulnar Nerve.—Dislocation of the ulnar nerve at the elbow is a comparatively rare affection, occurring independently of fractures or dislocations of the bones of the elbow, and may result from direct violence, or from muscular effort or violent flexion of the arm at the elbow, causing laceration of the fascia which holds the nerve in its groove at the back of the inner condyle of the humerus. The symptoms resulting from this injury—pain, tingling in the parts supplied by the ulnar nerve, and a certain amount of disability of the elbow—are usually more marked immediately after the injury, but the symptoms usually become less marked in a short time, in many cases very little permanent disability seems to follow, the nerve accustoming itself to its new position. Very rarely a neuritis is developed. In view of the possibility of the development of a neuritis, it seems wise to replace the dislocated nerve and fix it in its normal position as soon as possible after the injury. The most satisfactory method of securing the nerve seems to be that practised by Mr. MacCormick, who exposed the ulnar nerve, and having made a bed for the nerve by dividing the fibrous structures behind the inner condyle of the humerus, fixed it in its usual position by two kangaroo-tendon loops passed through the inner margin of the triceps tendon and somewhat loosely around the nerve; several sutures were also used to unite the divided margin of the fascial expansion of the triceps tendon superficial and the nerve. In all cases where the nerve was exposed and sutured in its normal position the result was satisfactory, and the dislocation did not recur, and in no case is it recorded that neuritis developed in the nerve as a result of operative treatment.—Wharton.—*Medical Record.*

Recent Advances in Cerebral Surgery--Von Bergmann (*Centralblatt für Chirurgie*, No. 27, 1895), at the German Surgical Congress, brought to notice certain advances that have recently been made in the department of cerebral surgery.

In cases of tumor of the brain, surgery has, of late, done very little beyond facilitating a correct diagnosis, and rendering operative interference less dangerous. In Jacksonian epilepsy surgical treatment is usually followed by a relapse, and a certain cure can only be effected in which the convulsions are due to the compression of a circumscribed cortical motor centre, as by tumor or cyst. On the other hand, decided progress has been made in the operative treatment of different forms of intracranial suppuration of otitic origin, such as cerebral abscess, epidural suppuration, infective thrombosis of the lateral sinus and leptomeningitis. The most dangerous forms of chronic aural suppuration, which is usually excited by a collection of cholestomata in the interior of the ear, are indicated by intercurrent acute and subacute attacks with fetid discharge, and by the presence of polypoid granulations in the tympanic cavity and the auditory meatus.

The extension of the inflammation through the thin and carious ligamentum tympani sets up a pachymeningitis, which in turn gives rise to an extradural or epitympanic abscess, or to intradural or cerebral abscess. The cerebral abscess, when small, and in an early stage of development, is situated on the surface of the brain, but as it enlarges it sinks into the substance of the affected lobe. As the diagnosis between a superficial and epitympanic abscess on the one hand, and a cerebral abscess on the other, is attended with much difficulty, the author holds that in performing an operation it is necessary to expose both the extradural abscess and the part of the temporal bone most likely to be involved in the extension of the suppurated process. An operation is described by which the upper and anterior surface of the petrosal bone through a quadrangular opening made in the squamous portion of the temporal bone, just above the line of the zygoma, and between a line in front drawn directly upward to the sagittal suture from the tragus and a parallel line behind carried upward from the posterior border of the mastoid process. By this wound the mastoid antrum and cells may be opened when necessary and the sigmoid fossa reached. In conclusion, the author alludes to the successful surgical treatment of infective thrombosis of the lateral sinus.

Exposure and incision of the sinus with ligature of the internal jugular vein proved successful in six out of thirteen cases treated by Jansen, of Berlin. These cases added to those of Macewen and other surgeons showed that the operative treatment resulted in recovery in twenty-seven out of forty-five patients. Thrombosis of the lateral sinus is often associated with an extradural abscess on the roof of the tympanic cavity, and in most cases of cerebellar abscess forms a communication between this collection of pus and the suppuration in the middle ear. In exposing the outer surface of the mastoid process and the bone lying behind this, search should be made for the mastoid emissary vein. Not only is the orifice a good guide to the sinus, but in addition, the state of the vessel may aid in the diagnosis. If it contains pus, suppuration in and about the lateral sinus is indicated, if it be blocked by a thrombus, this will be a sure sign of thrombosis extending into the cavernous sinus. The author attributing much of the recent progress in cerebral surgery to improvements in technical details and in the instruments, makes use of an electric circular saw with which he divides the outer table, while the inner table is divided by the careful use of a chisel.—*University Medical Magazine.*

TREATMENT OF DIABETES.—Robin (*Bulletin de l' Académie de Médecin*, No. 23, 1895) employs what he terms an "alternating treatment" in diabetes. He believes that in this disease there is an increased activity of the chemical changes of general nutrition, and of the hepatic cells in particular, which is the result of increased activity of the nervous system. Hence he recommends drugs which diminish the activity of these general changes by acting primarily on the nervous system. The treatment is divided into three stages: (1) For four days a powder, containing about fifteen grains of antipyrin and eight grains of sodium bicarbonate, is given twice a day. In addition cod-liver oil is taken twice a day, and Seignette salt as a morning purgative. (2) At the end of four or five days the antipyrin is discontinued, sulphate of quinine prescribed,—six grains in a cachet at the mid-day meal. This is taken for six days, then discontinued for four days, and afterwards taken again for six days. Before the morning and evening meals a cachet is recommended containing arsenate of soda, carbonate of lithium, and codeia. (3) After fifteen days these drugs are discontinued, and the author prescribes, for ten days, a pill containing opium, belladonna, and valerian. The cod-liver oil is discontinued and the patient is allowed to drink a weak solution of bicarbonate of soda 1 in 125. In the case of nervous women, or if there should be intolerance of the opium and belladonna pills, fifteen grains of potassium bromide are given two or three times a day for eight days. In addition to the medical treatment the diet is regulated. On account of the loss of inorganic salts in diabetes the author recommends the food to be well salted; to supply potassium salts he advises green vegetables, especially cabbage and endive, and also a weak solution potassiom tartrate to dilute the wine taken at meals; and to counteract the loss of phosphates of magnesia. He also recommends bouillon on account of the inorganic salts which it contains. If sugar is still present in the urine after the third stage of the medical treatment above mentioned the course is recommenced. After a second course, whether sugar has disappeared or not, the drugs are discontinued for one month. Robin has treated by this alternating method 100 cases of diabetes, in each of which the daily quantity of sugar excreted was 100 grammes or more. In twenty-four of these recovery has occurred; in twenty-five recovery is still doubtful; in thirty-three there has been considerable and permanent improvement; in eighteen the results have been negative.—*Medical Record.*

VAGINAL SECTION AND DRAINAGE FOR PELVIC ABSCESS.—Watkins (*American Journal of Obstetrics*, August, 1895), in a paper read before the Chicago Gynecological Society, May 24, 1895, reports a number of cases where he has performed vaginal section and thus drained a pelvic abscess with the best results. The operation is indicated.—

(1) When the condition of the patient is such as to make abdominal section extremely dangerous.

(2) When the abscess is large, of long standing, and situated low in the pelvis, and when the patient gives a history of peritonitis.

(3) When abdominal section reveals extensive and firm intestinal adhesions.

(4) When the abscess is on the floor of the pelvis and is complicated by rectal fistulæ.

(5) Vaginal section may be indicated for the separation of adhesions which fix the ovaries and tubes on the floor of the pelvis, and for examination of the ovaries and tubes.

(6) Puerperal abscess. These abscesses frequently involving the tubes and ovaries, and satisfactory results usually follow through drainage of them.

The writer has done vaginal section for pelvic abscess nineteen times, and in every case the result has been relatively satisfactory. In two cases operations for secondary abscesses were required; in one case abdominal section was necessary to complete the operation. Excepting in the two cases which developed additional or secondary abscesses, the temperature became practically normal within a short time, and the patients have been out of bed at the end of two weeks. Many of the operations are of too recent date to permit a satisfactory report of the ultimate success, but some date back three years. None of the patients, to his knowledge, suffered especially from pelvic disease after the operation. Three have some enlargement to the left of the uterus, which may later on require abdominal section, and two of them have a sinus. The advantages of the operation are,—

(1) It is not dangerous to life.

(2) It is followed by little or no suffering.

(3) Recovery is rapid.

(4) No raw surfaces are left in the abdominal cavity to cause adhesions.

The objections to the operation are,—

(1) It is applicable in only a small per cent. of the cases of pelvic ab scess.

(2) Diseased tissue is not removed.

The tissue may, however, become normal after the abscess is opened and drained, as has frequently been the case after spontaneous rupture or puncture of the abscess. The nature of the abscess must be considered in selecting this method of treatment. For example, tubercular or gonorrhœal abscesses indicate excision more than abscesses due to some other infection. Watkins believes this operation should take the place of vaginal puncture or aspiration, since there is less danger of injury to the bladder, rectum, or some other portion of the intestinal tract. He has seen two cases where large blood-vessels have been injured with a fatal result. He advises vaginal section rather than celiotomy and secondary vaginal puncture, saying that celiotomy could be immediately performed if necessary. Vaginal section is performed as follows: The uterus is dilated, the uterine cavity explored, curetted, irrigated, and packed with gauze, if indicated. An incision about one inch long through the vaginal wall is made near the cervix, opposite the most prominent point of the tumor, —usually posteriorly. All connective tissue between the vaginal wall and the abscess is separated with the finger, or it may be necessary to divide some of the fascia with scissors. Careful exploration is then made determining whether the peritoneal cavity has been opened, and if so, it should be carefully walled off with gauze packing. The finger is then passed directly into the abscess, using a blunt instrument, if necessary. All pus is removed by thorough irrigation with sterilized water. Two drainage-tubes sutured together, one large and one small, are inserted and fastened to the cervix by sutures. Drainage should be continued as long as there is any discharge.

Correspondence.

ALVARENGA PRIZE.

To the Editor:

The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Señor Alvarenga, and amounting to about $180, will be made on July 14, 1896, provided that an Essay deemed by the Committee of Award to be worthy of the prize shall have been offered.

Essays intended for competition may be upon any subject in Medicine, but cannot have been published, and must be received by the Secretary of the College on or before May 1, 1896.

Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within it the name and address of the author.

It is a condition of competition that the successful essay or a copy of it shall remain in possession of the College; other essays will be returned upon application within three months after the award.

The Alvarenga Prize for 1895 has been awarded to Dr. Guy Hinsdale, of Philadelphia, for his Essay entitled "SYRINGOMYELIA."

CHARLES W. DULLES,
Secretary.

DECEMBER, 8, 1895.

To the Editor:

In the last copy of the NORTH CAROLINA MEDICAL JOURNAL appeared an editorial on the subject of examination fees for insurance companies, and their attempted reduction. I send you resolutions adopted October 8, 1895, by the Kershaw County Medical Association, of which I am Secretary.

"WHEREAS the New York Life, the Equitable and other life insurance companies, have issued circulars to examiners, wherein they announce a reduction of the fees for examination from $5.00 to $3.00 in certain cases; and

WHEREAS the fee for all such examinations has been long placed by the Kershaw County Medical Association at $5.00; and

WHEREAS there is as much trouble and care necessary for the examination in applications for $1,000 policies as for $10,000 or $50,000 policies, be it

Resolved 1. That this Association declines to make any examinations for these or any other companies for less than the amount required in our fee-bill—$5.00.

2. That a copy of these resolutions be sent to the companies making the aforesaid reduction."

Adopted unanimously.

At the same meeting the Association adopted resolutions, refusing to attend to post mortems for the county coroner, unless arrangements should be made by which a reasonable fee will be paid, the fees allowed by law being ridiculously low.

Respectfully,
JNO. W. CORBETT, M.D.

Miscellaneous Items.

Under this head space will be given (free of cost) to those paid-up subscribers who desire to change their location, or to dispose of practice or property. One insertion will be allowed, but inquiries must not be ordered addressed to this office.

Any news connected with professional men and matters in North and South Carolina will be appreciated by the Editor.

OFFICIAL LIST OF CHANGES IN THE PUBLIC SERVICE.

MARINE HOSPITAL SERVICE.

From November 28, 1895, to December 11, 1895.

The leave of absence granted Capt. William B. Banister, assistant surgeon, is extended one month.

The leave of absence granted First Lieut. James M. Kennedy, assistant surgeon, is extended two months.

Capt. Charles E. Woodruff, assistant surgeon, now on leave of absence is ordered to proceed from Washington, D. C., to Fort Snelling, Minn., and report for temporary duty without delay.

Maj. Richard S. Vickery, surgeon, is retired from active service this date, December 7, 1895.

Capt. Freeman V. Walker, assistant surgeon, is by direction of the President, wholly retired from the service this date, December 4, 1895.

Capt. William H. Arthur, assistant surgeon, is relieved from duty at Fort Columbus, New York, and ordered to Fort Myer, Virginia, for duty.

The leave of absence granted First Lieut. John S. Kulp, assistant surgeon, is hereby extended one month.

THE NAVY.

For two weeks ending December 7, 1895.

December 2.—Assistant Surgeon George C. Hubbard, detached from instruction at the Naval Laboratory, New York, and ordered to the "Vermont."

Passed Assistant Surgeon E. R. Stitt, detached from the "New York" and ordered to the Coast Survey steamer "Bache."

Passed Assistant Surgeon G. H. Barber, detached from the "Bache" and ordered to the "New York."

THE ARMY.

For the week ending November 30, 1895.

November 26.—Surgeon F. Anderson, detached from the "Amphitrite" and ordered to the "Dolphin."

Surgeon P. M. Rixery, detached from the "Dolphin" and placed on waiting orders.

Surgeon J. E. Gardner, detached from Port Royal Station and ordered to the "Amphitrite."

Passed Assistant Surgeon I. W. Kite, detached from the "Franklin" and ordered to the Naval Hospital, New York.

Passed Assistant Surgeon T. A. Berryhill, detached from the Naval Hospital New York, and ordered to the Port Royal Naval Station.

NECROLOGY.

SOME RECENT DEATHS AMONG PHYSICIANS.

Richmond Lennox, M.D., Brooklyn, Nov. 11.

W. Herbert Dunlap, M.D., Syracuse, N. Y., Nov. 11.

Thomas Flowmoy, M.D., Richmond, Va., Nov. 20.

Elman H. Borst, M.D., Newburgh, N. Y., Nov. 8.

Wm. Starbuck Mayo, M.D., New York, N. Y., Nov. 22.

Benj. Cushing, M. D., Boston, Oct. 16.

Cary B. Blackburn, M.D., Louisville, Ky., Dec. 4.

Milton R. Cook, M.D., of Ashtabula, O., one of the oldest practitioners in the county, died in jail, where he was confined, pending trial upon the charge of performing a criminal operation.—*Jour. Am. Med. Asso.*

J. Edwin Michael, M.D., Baltimore, Md., Dec. 7. Dr. Michael was one of the foremost physicians of Baltimore and the South. He was the Dean of the University of Maryland, and President of the Medical and Chirurgical Faculty of Maryland. He was 47 years of age and cause of death was nephritis.

J. H. Wintrode, M.D., Marklesburg, Pa., Nov. 17.

D. M. Miller, M.D., Elizabeth, N. J., Dec. 3.

John A. Jones, M.D., Mansfield, O., Dec. 3.

A bill for the establishment of a Bureau of Public Health has been introduced in the House of Representatives by Mr. Mahon of Pennsylvania.

We are pleased to see it announced that sufficient subscriptions have been received to insure the revival of the *Index Medicus.*

THE PRACTICE OF SUBSTITUTION.—This is a growing evil, which, however, we believe, is not as common in this State as in some others, especially in the North and West. When a physician prescribes a certain preparation either by special name or by adding the initials of the manufacturer, he has his reason for doing so and the druggist has no right to dispense any other preparation. If he has not in stock the article called for he should either decline the prescription, procure the article from some other druggist, or get the authority of the physician to substitute some other preparation.

With the purpose of breaking up the custom we will expose those who are guilly of the practice on receipt of sufficiently convincing evidence of their guilt. We ask the assistance of our readers in this endeavor. If you have been the victim of this practice send us the name of guilty party, with all the evidence, duly signed and sworn to and we will give publicity to the transaction. We believe that all doctors, honest druggists, manufacturers of legitimate preparations, and the public will be benefited by our action in this matter. It would also be well for those druggists who have been in the habit of using their own judgment in this matter to mend their ways for the future.

Dr. Gleaves, in the *Medical Record*, page 715, reports the case of a girl 10 years and 2 months old giving birth to a well-formed child. She had menstruated from the age of 5 years. The labor was short and uneventful The mammary glands were not developed, and the grandmother nursed the infant, which lived a week.

Dr. D. S. Rowland has removed from Bobbitt to Kittrell, N C.

Dr. R. L. Payne, of Lexington, has been sojourning a few weeks in the metropolis where he makes his headquarters at the Polyclinic. He reports as the latest fad in New York, the custom of dropping into the scrotum a celluloid testicle for its æsthetic effect after castration. He thinks this ahead of the wooden nutmeg.

Married. Dr. Charles T. Harper, and Miss Jessie Glenora, daughter of Mr. and Mrs. Geo. H. Zimmermann, were married on the 18th inst. at Fulton Avenue Presbyterian church, Baltimore. They will reside at 219 No. Fulton Ave. and will be "at home after January 5, 1896." We extend the doctor and his bride our heartiest congratulations and good wishes.

HUMANE POLICE CLUB.—Somebody has invented a policeman's club which has a rubber envelope and a wood core. Messieurs the thugs, will be pleased to know that when this humane club is once in the hands of our guardians of the peace, there will be no more cracked skulls. The near approach of the millenium is thus foreshadowed. As usual, we learn that the new esthetic weapon has been tried upon a dog. His dogship, naturally enough, on regaining his canine wits, wagged his tail and in his own way expressed his pleasure in having been knocked out in so pleasant and altogether humane a way.—*Jour. Am. Med. Asso.*

BANQUET AND PRESENTATION IN HONOR OF JOHN S. BILLINGS. M.D., LL.D.—A dinner was given at the Hotel Bellevue, Philadelphia, November 30th, in honor of John S. Billings, by the American subscribers to the Billings Testimonial. Dr. S. Weir Mitchell, as chairman of the Committee, presided, and having made the presentation speech, placed in Dr. Billings' hands a silver box containing $10,000, and having engraved upon it, "To John S. Billings, from 259 physicians of the United States and Great Britain in grateful recognition of his services to medical scholars." On the side of the box there is, in Latin, a statement to the effect that he who has made a catalogue ot a great library has created a memory of the wisdom and learning of the past.

In conclusion Dr. Mitchell said: "In offering this box to my old friend, and the gentleman you desire to honor to-night, I would say that while the silver box contains this practical recognition of his services it also contains something more, as my imagination figures it. You all remember that phrase of Dr. Johnson's 'Wealth beyond the dreams of avarice.' There is, as I think of it, within this box, for an imaginative man, that wealth which represents the good feeling, the friendly opinions, the thankfulness, of the scholarship of two continents. Also I may say that this wealth represents a noble avarice, of that kind which my friend has shown all his life—a desire to be loved and respected by those in our profession whom men most rightly honor."—*Boston Medical and Surgical Journal.*

WOODEN DIAGNOSIS WITH UP-TO-DATE THERAPEUTICS.—Certain medical men of London, are said by *Popular Science* to be breaking up the patent medicine business. Certain wooden figures have been put up on the nickel-in-the-slot principle. The figures are shaped like a man, with holes in every part of the body labeled with the diseases that usually affect that part. For headache you find the proper slot so labeled in the head of the figure, and drop in a penny; out comes an inexpensive but efficient prescription that can be filled by any druggist. These prescriptions are said to be gotton up by prominent doctors and are very good and useful. One object of this device is to make medicine cheaper to the poor and restrict the use of dangerous proprietary mixtures. The notice reads more like a bit of journalistic enterprise than a fact.—*Jour. Am. Med. Asso.*

The St. Louis Academy of Medical and Surgical Sciences was organized on November 6, 1895. The constitution of the society subscribes to the code of ethics of the American Medical Association. The membership is limited to fifty.

No one can become a member of the Academy unless he possesses a good literary and medical education. As evidence of his literary qualifications and ability as a scientific worker he must deposit with his application, a thesis, a pathological specimen with descriptive text, a drawing of a normal or abnormal specimen with text, or some other evidence of his worth. The evidence is passed upon by the committee on credentials. If the evidence is accepted, the ballot is taken. Two negative votes will defeat a candidate. The following officers were elected for the ensuing year:

President, Geo. W. Cale, Jr., M. D., F.R.M.S., London; Senior Vice-President, James Moores Ball, M.D.; Junior Vice-President, Arthur E. Mink, M.D.; Secretary, Emory Lamphear, M.D., Ph.D.: Treasurer, Wellington Adams, A.M., M.D.; Orator, Thomas O. Summers, A.M., B.S., M.R.C.S., Eng., M.D.; Curator, George Howard Thompson, A.M., M.D.

USE OF THE VERMIFORM APPENDIX. The vermiform appendix is rich in lymphoid or adenoid tissue, which suggests the possibility of its being the center for the production of leucocytes or lymphocytes, writes Dr. D. A. Sutherland in London *Lancet.* Elsewhere in the alimentary canal the importance of adenoid tissue is fully recognized, and the action of the lymphocytes produced there has been fully explained. According to Berry's researches, the function of the appendix is, (1) leucocyte producing, and (2) secretory. Leucocytes he considers useful in the destruction of micro-organisms and the absorption of proteids. Such protective power would be of great service, for processes of decomposition going on unchecked in the cæcal region would probably result in symptoms of auto-intoxication that would be extremely common. With appendicitis regarded as a purely local condition, due to such local causes as catarrh, concretion, cystic dilatation, etc., the author thinks it also quite possible that the vermiform appendix may be acted upon by poison circulating in the blood and thus become acutely or chronically inflamed. Rheumatism may be such a poison.—*Jour. Am. Med. Asso.*

A bill to regulate the practice of medicine in the District of Columbia, has been introduced into the Senate by Senator Harris.

The American Medical Review has made its appearance, the initial number having just been received. It is in magazine shape, double column and the first number contains sixty-four pages. The *Review* promises well and we have no doubt will keep its promise. Under the section devoted to "medical progress" it provides an interesting epitome of the medical literature of the preceding month. It has sections devoted to medical society reports, book reviews, professional opinion, personals and a very valuable "index medicus" of original articles appearing in Amerimedical journals. It is cheap at $1.00 a year.

MILITARY WAR TRAINS.—The Canadian Pacific Railway, after many months of labor, has constructed at enormous cost two special military or war trains, comprising fourteen cars for men, two cars for cooking, two Pullman cars for officers, two cars for arms and stores, and two dining cars. The officers' cars are luxuriously fitted out, and contain state rooms, lavatory, smoking room. etc. Each train is composed of eleven cars and engine, and gives ample sleeping accommodations for 306 men and 15 officers, although over 100 more men could find room. The men's cars are well finished and furnished with modern improvements. The kitchen car has all the utensils of a large-sized hotel, and requires six cooks and two helpers. This one car can turn out over one thousand five hundred meals a day. During a trip from Halifax to Vancouver on the war train, 5,500 meals for officers and men were prepared. The Canadian Pacific Railway expect to cover the distance from the Atlantic to the Pacific in five and a half days.—*British Medical Journal.*

Reading Notices.

A PICK ME UP.—Dr. John Van Renselaer Hoff, Major and Surgeon, United States Army, says: "I believe that malt extracts meet a therapeutic indication, and that Maltine is an admirable form of this remedy, as well as an excellent vehicle for several generally used medicines. I have long used Maltine with Cascara Sagrada with signal benefit in chronic constipation. Recently I have been trying Maltine with Coca Wine quite extensively, and have found it admirable as a 'pick me up' in debilitated cases."—*From the Northwestern Lancet, November 1, 1895.*

D. T. Hudgens, M.D., Elizabeth, Ark., says: I have used S. H. Kennedy's Extract of Pinus Canadensis in leucorrhea with very good results. I have had under my treatment Mrs. S., age 33 years, for leucorrhea, with anteversion of the uterus. I used the White Extract per vagina as a local treatment for the leucorrhea, and the treatment was attended with success. I am satisfied that Pinus Canadensis should occupy a prominent position in our materia medica.

LACTOPHENIN.—Landowsky (*Sem. Med.*, Feb. 7th, *Med. Record*) has tried the effect in several cases, of lactophenin, a substance very closely allied chemically to phenacetin. This drug has antineuralgic properties analogous to antipyrin, and has, besides, a genuine hypnotic effect. The amount given daily was from sixty centigrammes to three grammes divided into several doses. The only disagreeable by-effects caused by the drug seemed to be diaphoresis and slight giddiness in a few of the patients.

SIX HUNDRED ($600) DOLLARS IN PRIZES.—The special attention of our readers is called to the advertisement of the Palisade Manufacturing Co., with the above title which will appear in our next issue.

The prize contest which this well known firm announces will no doubt attract a great deal of attention, and result in the submission of many articles of merit on "The Clinical Value of Antiseptics both Internal and External." The prizes are extremely liberal, and the well known professional and literary eminence of Dr. Frank P. Foster, the talented editor of the "New York Medical Journal," who has kindly consented to act as judge, is a sufficient guarantee of the impartiality to be observed in the awarding of the prizes.

We are assured that there is absolutely "no string" attached to the provisions of this contest, and any physician in good standing in the community is invited to compete on equal terms with every other competitor.

Further particulars as to conditions etc., can be obtained by addressing the above named firm.

J. H. Egan, M.D., in the *Medical Summary*.—*Spasmodic Croup*.—I have treated four cases with the Vaporizer and Vapo-Cresolene. Case 1. Aged 30. Has had frequent attacks previously. Called at 2 a. m. In two hours she was well. Case 2. Aged 9. Called at 1 a. m. Her father said she would die unless at once relieved. *In ten minutes* after I lit the lamp under the Vaporizer she was out of danger. The other two cases were equally satisfactory.